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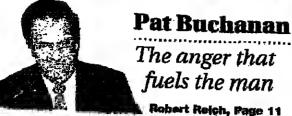
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# FINANCIAL TIMES



Political football

Broadcasting victory for Cecci Gori



**EU** integration

A reversal of orthodoxy lan Davidson, Page 10



FT-IT Review

Converging technologies

WEDNESDAY MARCH 6 1996

# fighters from US

World Business Newspaper

The UK Ministry of Defence abandoned a plan to lease US F-16 fighters and will upgrade its existing Tornado fighters to fill a gap until the Eurofighter, being developed by Britain, Italy, Germany and Spain, comes into service. British Aerospace will be given a £125m (\$192.5m) contract to fit improved clastronics to the F3 Tornado fighters which will electronics to the F3 Tornado fighters which will allow them to carry the latest short and mediumrange missiles, Page 12

RJR Nabisco tempts shareholders; RJR Nahisco, US tobacco and food group fighting efforts to force it into a break-up, tried to win shareholders' allegiance by announcing a 23 per cent increase in its dividend and a \$100m (£64.9m) share repurchase programme. Page 13

Tokyo move on bail-out Impasse: Japan's government offered further talks with the main opposition party about a controversial plan to spand public money on bailing ont bankrupt housing loan companies, or jusen. Page 12; Mad batter enters fray, Page 6; Editorial Comment, Page 11

UK told to reconsider deportation



British home secretary Michael Howard was told by a judge to reconsidar the decision to deport Saudi dissident Mohammed al-Massaari (left). The judge ruled

that Mr Howard had not established that Mr Massaari would be safe in Dominica, the Caribbean island to which he was dua to be expelled. Tha

government decided to daport Mr Massaari after pressure from the Saudi government, which had warned that arms deals could be jeopardised if the Islamic dissident remained in Britain.

Footsle hits intra-day record: The FT-SE 100 index recorded a record intra-day high of 3,792.5 in early trading because of hopes of a cut in base rates later this week and a strong performance by Wall Street on Monday. It closed at 3,777.1. London stocks, Page 26; World stocks, Page 30

BA attacks anti-trust move: British Airways attacked Lufthansa of Germany and United Airlines of the US for deciding to apply for anti-trust immunity, saying it was contrary to the spirit of a more competitive airline industry. Page 4; BA to launch internal TV service, Page 7

Bridgestone in grand prix challenge: Bridgestone of Japan, the world's second-largest tyre maker, is to challenge Goodyear's tyre supply monopoly in Formula One grand prix motor racing. Page 4; Jaguar unveils E-type 'successor', Page 7

Religing seeks to end hudget deficits; China bopes to eliminate its budget deficit by 2000, but faces big challenges in boosting revenues and controlling expenditures, finance minister Liu Zhongli told parliament. Page 6

States face claims over EU laws: European Upion governments must compensate individuals and companies for losses resulting from the states' failure to implement EU laws correctly, the European Court of Justice ruled. Page 12

Fastery orders may boost US economy: The DS Commerce Department said new orders for manufactured goods rose 0.5 per cent in January. The rise indicates that the economy may rebound this spring. Page 5

Kmart plans eastern Europe sale: Troubled US discount store group Kmart looks set to raise a badly-needed \$117.5m (£76.2m) by selling its 13 stores in the Czech and Slovak republics to UK retailer Tesco. Page 13

**GS Helding 5% ahead:** CS Holding, financial services group built around Credit Suisse, reported a 5 per cent rise in 1994 net income to SFr1.4bn (\$1.2hn). Page 13; Lex, Page 12

Coles Myer drops break-up plan; Coles Myer. Australia's higgest retailar, said it would not to pur-sue moves to break up the company into separatelylisted operating units. Page 13

Sorvices lose their pictures: Britain's Ministry of Defence has "lost" 161 works of art from its inventory of 900. Soma items are missing because military personnel often take office decorations with them when they move. Page 7

**World Cup Cricket:** South Africa had a 160-run victory over the Netherlands in Rawalpindi, Pakistan. West Indies cricket captain Richie Richardson announced be would quit international cricket altogether after the tournament.

STOCK MARKET DIDICES IN GOLD

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O THE FINANCIAL TIMES LIMITED 1996 No 32,926 Week No 10

# UK abandons plan Israel steps up war on Hamas to lease F-16

Mark Dennis in Gaza and Patti

Israeli and Palestinian troops intensified thair war on tha Hamas Islamic movement yesterday amid international efforts to halt the worsening violence and save the Middla East peace pro-

Israel dismissed tha offer of a ceasefire ordered by dismayed Hamas political leaders and sent troops into the West Bank to seal the homes of sulcida bombers and round up activists. Hamas factions have been responsible for a series of suicida bombings in Israel over the past 10 days which have left 57 people dead. The Israali govarnment rejected the offer of a ceasefire, conditional on a balt to action against Hamas activists, follow-

Troops enter West Bank and villages are put under curfew ing the failure of two previous ceasefire calls by Hamas leaders.

Mr Shimon Peres, the Israeli eign policy advisers.

prime minister, who is fighting for his political survival ahead of elections in May, banned Pales-tinians from travelling between self-rulad enclaves, and placed several villages under 24-bour curfew. "This is the beginning. They had their say, they'll get a response," he said.
President Bill Clinton of the US

sent bomb-detection aquipment and counter-terrorism experts to Israel yesterday as part of a US effort to buttress the country's security and provide reassurance. The US has always stood with the people of Israel through good times and bad, and we stand with

Mr Clinton pledged US help to defeat the terrorist campaign and to revive the peace process. US intelligence officials would ba sent to Israel to strengthen its anti-terrorist operations.

He said Washington would pur-sue diplomatic channels to isolete Iran and other countries that support Hamas. On Monday Mr Clinton sent strongly-worded letters to Jordan's King Hussein and Mr Hafez al Assad, the Syrian prasident, urging them to clamp down on Hamas ectivities abroad. Tha US campaign to isolate Hamas ahroad received support from Britain and other Euro-

pean Union countries. Mr Michael Heseltine, the UK deputy prime minister, warned Hamas activists living in Britain that the government would not tolerate eupport for terrorism. In Palestinian-ruled Gaza, Mr

Mohamed Dahlan, internal security chief, said the self-rule authority was taking drastic steps to destroy Hames politi-cally and militarily.

A state of emergency was in force throughout the West Bank and Gaza Strip and security forces had started a manhunt for Israel's list of the most wanted ectivists. "We are trying to isolata Hamas from the people, control the mosques and stop thair financing," said Mr Dahlan. But

warned that Israel's tough security measures could undermine the fragile peace and that collec-tive punishment, such as house demolitions and travel bans, would hreed reseutment.

Mr Ahmed Qurie, chief Palestinian negotiator, said Israel's decision to give its forces freedom to strike at terrorists inside Palestinian controlled territory "will be a great mistake because it will weaken the Palestinian authority". Israeli officials said yesterday's military steps stopped short of a serious violation of Israeli-Palestinian accords.

Lex, Page 12

### Beijing's actions near Taiwan waters may cause severe disruption to shipping

## US, Japan condemn Chinese missile test plans

By Laura Tyson and Peter Montagnon in Taipel and Tony Walker in Beljing

The US and Japan yestarday condemned plans by China to stage week-long missila tests in waters near Taiwan from Friday. Shipping companies warned of severe disruption to busy aaa lanes in the region and Taipei share prices fell sharply.

middle of campaigning for Taiwan's first direct presidential elections, to be held on March 23. It also follows warnings that China might take military action if the election winner pushed for independence.

The missile tests will be closer to Taiwan than previous axercises in July and August last year, and appaar designed to emphasiae China's ability to hlockade Taiwanese ports. Tha test areas are less than 50km from the ports of Keelung and Kaohsiung, the world's third largest container port.

In Washington, Mr William Perry, US defence sacretary, attacked China's decision. "I think it is a very bad mistake on their part to put the impact area so near to Taiwan," ha told the Sepate armed services committee. "I deplore that decision on their part and I will axpress my concern to them [China]."

Premier Li Peng of China said that, while his country had been working for peaceful reunifica-tion, "we shall not undertake to



was speaking in a state of the nation address to the opening session of the National People's Congress, China'a parliament.

Mr Lee Tang-hui, Taiwan'a popular president who is seeking a second term, sounded a note of dafiance. "The quantion they [China's leaders] are most scared of is Taiwan's democratisation, he said. "If that democratisation is successful, the 1.2hn people on the mainland will think that if Taiwan can choose its own leader, then why cen't the main-

land? Tha Taiwanasa government insisted that the elections would not be disrupted, but the defence ministry put forces on high alert.

Shares in Taipel tumbled 1.3 per cent yasterday, with the waighted index down 62.49 to 4,792.74. Mr Lien Chan, prime minister of Taiwan, said the election would not alter the ruling Knomintang party's objective of

achieving eventual unification. Mr Hirosbi Hashimoto, Japanese Foreign Ministry spokesman, said in Tokyo that the Chinese missila tests would not be "desirable for peace and stabil-ity" in East Asia. The official Xinhua naws

agency said that the Peopla'a Liberation Army would conduct surface-to-surface misaile tasts in waters off northern and southern Taiwan from March 8-15.

nese government requests the governments of relevant countries to notify ships and aircraft not to enter the said sea areas and air spaces during this period." Xinhua said. Mr Keny Chou, London representative of

the Yang Ming Line, a Taiwanese container group, said the need to steer clear of the missile tests would have a big impact on shipping in the strait".

Shipping under threat, Page 6

## **Brussels** tackles Fifa over royalties on footballs

By Patrick Harverson in London and Emma Tucker in Brussels

The European Commission yesterday launched a flying tackle against Fifa, foothall's powerful governing body, over royalties charged on sales of foothalls stamped with its logo.

In dawn raids, offices of national football associations in the UK. France and Denmark were searched by Commission competition inspectors aftercomplaints by the international trade body representing football manufacturers.

Fifa insists on approving all halls used in international metches. From January it has charged e SFr1.50 (\$1.25) fee on each hall stamped with the nec-

essary logo "Fifa-approved". Manufacturers say this extra cost is unfair because I beir balls were already of sufficient quality. They also fear balls could be just the beginning, with Flfa going on to seek payments for putting its logos on sbin pads, boots and goalkeeping gloves.

Additionally, they argue that the sale of all footballs could be affected hecause international matches are showcases for the sport and consumers generally will demand footballs stamped with the same logo.

"We are talking about millions of balls," the Commission said. Eight million of the 40m balls produced annually are used in top level matches around the

The Commission believes Fifa may he abusing its dominant position. Although national football associations are not directly involved in the new Fifa ball licinspectors are believed to have raided their offices in the bope of finding correspondence between the associations and Fifa.

The Commission also feared Fifa might have been acting collusively with national football associations in imposing the levy by insisting that balls for club games carry the logo.

Fifa's headquarters in Zurich remained closed to Commission inspectors yesterday as

Continued oo Page 18 Italian film mogul projects higger image, Page 2

## First Brazilian rail concession sold to US-led consortium

Part of Brazil's national rail network was sold off yesterday in an auction marking the start of the most ambitious project under the govarnment's privatisation

A 30-year concession to operate 1,621km of track in the centrewest of the country was bought hy a consortium led by the Noel Group of the US for R\$62,36m (US\$68.4m), a premium of 3.6 per cent over the minimum price of R\$60.2m. The other members of the con-

sortium are Western Rail Inves-tors, Bank of America International Investment Corporation, Chemical Latin America Rquity Associates and DK Partners. Both the Noel Group and Western Rail have made recent acquisitions in US rail services. Mr Varel Freeman, managing

Susiness & Engine.

director of Chemical Latin, said the consortium would invest in modernisation to expand freight capacity. "Wa are extremely ased to have won the concession and are looking forward to halping to modernise Brazil's railway operations," he said. We see tremendous potential for

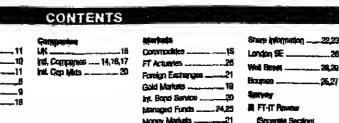
Brazil'a rajiways ara used almost axclusivaly for fraight; cheap passenger travel is mostly provided by coach operators. Despite the country's large size. however, only about 7 per cent of freight is transported by rail, with most of the remainder being moved by road.

Tha whole natwork - tha RFFSA - will be sold in six auctions and is expected to raise a total of about US\$1.4bn. Management of 32,000km of track will pasa into privata bands, along with 1,400 locomotives and 36,000 wagons, Modernising the netan estimated US\$4bn. Tha natwork has suffared badly from underinvestment in recent years; 47 per cent of its locomotives are out of service, against an international average of 17 per cent.

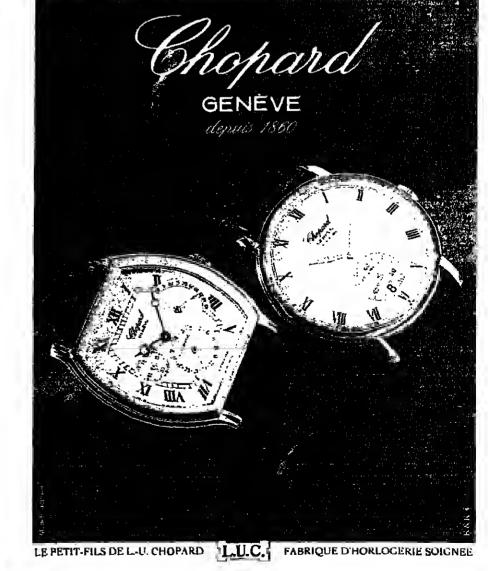
Tha Noel Group consortium beat off a rival bid by a consortium of Brazilian companies led hy a subsidiary of state mining giant Companhia Vala do Rio Doce. Payment will be made in instalments, with a down payment of 10 per cent.

Payment is in cash, unlike earlier privatisations which allowed payment in domestic debt certificates. Thase were accepted at face value despite trading at discounts of up to 40 per cent.

Yestarday's agle will be followed on April 15 by the centreeast region, to be sold at a minimum Price of R\$316.9m. Other dates and minimum prices have yet to be set.



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By David Buchan in Paris

Britain yesterday warned its European Union partners against seeking "sham displays of unity" in EU foreign and security policy, and instead proposed a series of practical measures to improve the preparation, flexibility and rapidity of EU decisions.

In a Paris speech setting out the line Britain will take on foreign and security policies in the intergovernmental conferences, Mr Malcolm Rifkind, the UK foreign secretary, effectively rehuffed the two main initiatives floated by France and Germany last week.

Paris and Bonn called for the Western European Union (WEU) defence organisation to be integrated into the EU, and for a new notion of "construc-tive abstention". Countries objecting to some EU foreign or security policy would sim-ply stand aside and not block others from pursuing it.

Reiterating Britain's opposition to any "subordination" of the WEU to the EU, Mr Rifkind

"constructive abstention could WEU and EU co-ordination be useful where a country supports a proposal but for constitutional or other reasons is unable to participate fully". He cited the case of Germany which, though unable to field peacekeeping troops in Bosnia, provided political and financial backing to others' forces.

But "constructive absten-tion", while it constituted a welcome admission that foreign or security policies could not be decided by majority ver-dict, would still not resolve real disagreements between EU members, Mr Rifkind said. France, he suggested, would

not have bowed to the anti-nuclear majority within the EU and abstained "constructively" by refraining from, or cutting short, its recent nuclear test "Dissenters cannot surely be expected to give political or financial support to the policies with which they disagree," said Mr Rifkind. Mr Rifkind focused yesterday

on practical ways of improving EU foreign and security policy decisions, just as a year ago the UK had proposed several without merging them.

He suggested EU members should put more diplomats and money at the disposal of the Council of Ministers to make it better prepared for, and more responsive, to crises. He also gave qualified endorsement to France's proposal for a new EU

foreign policy representative.
"Like France, Britain aees possible attractions in appointing a single figure to represent the foreign policy of the Union to the outside world," he said, though the person should be the Council's "servant, not its chairman". This hardly constitutes the high-profile appoint-ment that Paris originally had in mind. However, France may be able to use it as a lever on Germany, which is proving reluctant to support the French idea for a new post. In his Paris speech, Mr Rif-kind played on France's recent

nuclear disagreements with many of its EU partners to stress the risks of pushing EU amhitions in foreign and security policy too far.



## Kingmakers of Catalonia put a high price on the PM's chair

By Tom Burns and David White in Madrid

Catalan nationalists yesterday raised the stakes for helping the centre-right Popular party (PP) form a government after its narrow win in the general elections last Sunday by calling for a prior formal recogni-tion of Catalonia's separate

The demand, which runs him to win a parliamentary vote of confidence next month and become prime minister.

Mr Rodrigo Rato, the PP's

These negotiations have dis-placed discussions Mr Aznar - had he gained a clear elec-The political uncertainty that resulted from Sunday's

stantial measure of self-rule for

Armenian forces managed in

1993 to secure control both of

Karahakh, which has pro-

claimed independence from Azerbaijan, and large swathes

of surrounding territory.
Azeris blamed their defeat on

covert Russian support to the

The OSCE agreed in Decem-

ber 1994 to deploy a multina-tional peacekeeping force in

the region - but only if the de

diction of Azerbaijan.

Armenian side.

of a majority in parliament - prompted fresh falls on the panish stock market after shares prices tumbled on Mon-day. Madrid's general index lost 4.93 points yesterday, a fall of 1.5 per cent. Analysts forecast the sell-off

would continue in the absence

'Catalonia is a nation and its separate identity has to be recognised. The PP has never subscribed to this

of any clear signs of a new government majority.

The Bank of Spain issued lts own negative view of

Unity (CiU) coalition, which has run the Barcelona-hased Generalitat, for the past 16 years and strongly stamped its nationalist policies on the rea, holds the key to a possible Aznar-led government. The Socialist party, led by

Mr Felipe González, the ontgo ing prime minister, and other leftwing parties gained 166 seats in parliament. Only the CiU can provide the centreright with a working majority by adding the 16 members It returned to the Madrid parliament to the 156 elected on the PP lists.

The price for CiU support is, however, one that the right-wing in Mr Aznar's party could find impossible to pay. It involves the extension of the home rule process in Catalonia that Madrid-based conservatives feel bas already gone far

Mr Pere Esteve, a senior spokesman for the Catalan nationalists, said yesterday that the CiU's fundamental difference with the PP was over their respective understanding of what the "Spanish state" really was.

"Catalonia is a nation and its separate identity has to be recognised." Mr Esteve said. The PP has never subscribed

## Moscow drops share tender

**EUROPEAN NEWS DIGEST** 

The Russian government will retain state control of Rybinsk-Motors, overturning a plan to tender 37 per cent of the troubled engine manufacturer's shares after a potential foreign buyer withdrew. The decision is a further indication of the change of government thinking about the country's controversial privatisation programme and suggests the state may be planning to play a more active role in supporting

may be planning to play a mark the strategic industries.

Mr Alexander Kazakov, the newly-appointed privatisation chief, had already indicated that he would slow Russia's privatisation programme drastically, and would aim to manage state property more effectively. Only five companies out of an original 30 - remained on the privatisation list for this year, Mr Kazakov said.

Rybinsk Motors, one of Russia's higgest manufacturers of aircraft engines, was declared insolvent last year. It has fiercely opposed the government's privatisation plans, claiming that they threaten the country's strategic interests.

Gazprom, Russia's glant gas monopoly, has expressed an interest in the plant, belleving its technology could be adapted

#### German health system in red

Germany's health insurance system ended last year with a DM7bn (\$4.7bn) deficit last year, after a DM2.4hn surplus in 1994, prompting fears that contributions may have to rise unless savings are made.

Mr Horst Seebofer, the health minister, warned that contributions, divided equally between employers and employees, could jump by one percentage point to 14.4 per cent of earnings unless agreement is reached between the federal government and the Lander (states) on disputed plans to limit the costs of hospital care.

Last year's deficit was lower than the DM10bn-DM12bn recently forecast by health insurance officials. Mr Seehofer said the move into deficit slowed markedly in the final three months, with the 1995 shortfall in western Germany dropping to DM4.15hn from DM5.8bn at the end of September. However, the deficit in eastern Germany grew to DM2.85hn from DM1.7bn in the first three quarters.

Peter Norman, Bona Peter Norman, Bonn

#### Poland's pension plans

Poland's planned new pension funds will be endowed with only minority stakes in state-owned companies under the government's social security system reform plan, according to Mr Wieslaw Kaczmarek, the privatisation minister. "Funds' stakes will be passive ones," he said yesterday, saying that only financially sound companies would be earmarked to assist the social security reforms.

The finance and labour ministers have promised to prepare a bill on the new pension funds during the first six months of this year, and the ontline of the government's social security reform awaits a debate in parliament.

Under the scheme, the funds, contributions to which would be tax-deductible, would relieve the government of part of the hurden of subsidising pensions and disability benefits, which consume more than 20 per cent of the national hudget each

#### Stalin fondly remembered



Mr Georgy Buzikashvili, a curator at the Joseph Stalin eum in Gori. Georgia, the former Soviet dictator's birthplace, sheds a tear on the 43rd anniversary of his death. More than 200 Georgians staged a rally to commemorate the anniversary of a man responsible for the murder of millions of Soviet citizens. "As long as Gori still exists, Stalin will live," said one octogenarian. "He was a great man, a kind man. He had no minuses." Peter Graff, Tiblisi. Photo: AP.

#### Russian arms exports soar

Russia exported \$3bn worth of arms last year, an 80 per cent increase over the previous year. Mr Oleg Soskovets, first deputy prime minister, said yesterday. Mr Soskovets, speaking at a meeting of the government's council for co-operation in military technologies, said that revamping the country's military marketing systems was paying off.

He told the council that arms sales were a good source of hard currency for Russia. He said 75 per cent of the arms deals were in cash, from 51 countries. Officials have already said that Russia hopes to sell as much as \$3.5bn worth of arms this

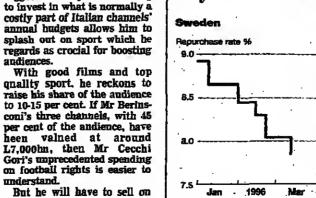
#### France to aid clothing industry The French government yesterday announced a FFr2bn

(\$400m) a year aid plan for textile, clothing and shoe companies, hard hit by cheap imports especially from Italy. But the European Commission signalled its opposition in principle to such support, and warned that the plan would The plan would reduce employers' social security charges

for lower-paid workers and increase the government contribution towards the cost of putting employees on part-time work. In return, companies would have to commit themselves to maintaining jobs and to hiring more young people. But the Commission said It preferred general job-creation schemes to sectoral ones. David Buchan, Paris

ECONOMIC WATCH

#### Key interest rate cut in Sweden



growth this year, Mr Göran Persson, the finance minister. predicted yesterday. His forecast came as the central bank, the Riksbank, lowered its key interest rate for the fifth time this year. The cut lowers the bank's repurchase rate to 7.85 per cent from 8.05 per cent, a fall of 1.06 percentage points over two months. Mr Persson, who is set to take over as prime minister from Mr Ingvar Carlsson in two weeks' time, said the finance ministry

Sweden will qualify for

European monetary union in

1997 despite slower economic

would soon lower its forecast for growth this year from its most recent prediction of 2.7 per cent. Independent forecasts set the figure at less than 2 per cent. With inflation under control, the authorities are keen to stimulate growth to tackle high unemployment. Mr Persson said he expected further interest rate cuts. Christopher Brown-Humes, Stockholm

## also told the French International Relations Institute that practical steps to improve Editorial Comment, page 10 **Bundeswehr finds itself** short of conscripts

By Michael Lindemann in Bonn a surprise French decision to

340.000-strong Bundeswehr, Germany's armed forces, is likely to have "con-siderable problems" finding enough conscripts in future because a soaring number of young people prefer alternative forms of public service, Ms Claire Marienfeld, the Bundeswehr's ombudswoman, says.

A record number of young male Germans ~ 160,659 refused to serve 10 months in the armed forces last year. choosing to work in such alternatives as hospitals, even though the term is 13 months. The Bundeswehr could only fill lts ranks hy calling up older recruits who had not yet done their 10-month service, according to Ms Marienfeld's annual

Her warnings are likely to fuel discussions about the Bundeswehr's future following its parish help that bordered

opt for a professional rather than a conscript army. Ms Marienfeld insisted Germany stick to military conscription, popularly seen as "citizens in uniform", but that more should be done to improve the image of

the armed forces. She said the Bundeswehr should appear in school books which now make no mention of the armed forces. Soldiers should be encouraged to wear uniform more often, and exercise in the open countryside. oot just on military bases. "A Bundeswehr which makes no noise at all is no good," sbe

Young people had an unnecessarily negative image of the Bundeswehr. Ms Marienfeld said she had begun talks with a number of churches after it emerged that one church had offered all the young people in

told a press conference.

Correspondent

Pressure is mounting on

Armenia and Azerbaijan to set

tle their bitter dispute over the

enclave of Nagorno-Karabakh

so as to clear the way for a

hroader resolution of energy

and transport Issues in the

Mr Yevgeny Primakov, Russia's foreign minister, has

thrown Moscow's weight

behind a high-profile effort hy the 53-nation Organisation for

Security and Co-operation in

Europe to settle one of the

most hitter wars on ex-Soviet

strategically vital region.

army. The bill follows consertesters' right to use the slogan "Soldiers are murderers".

Despite the numbers opting out, the Bundeswehr's standing has improved partly because German soldiers had a greater role in international

The report also highlights the problems of German sol-diers serving in multinational units such as the Strasbourgbased five nation Eurocorps. Because French law forbids German soldiers to be armed in France, Germans doing sentry duty at the Strasbourg bar-

refuse armed service.

The ruling coalition last week approved a draft bill to fine or to jail for up to three years those who insult the vative outrage at court decisions endorsing anti-war pro-

peacekeeping such as the mission in former Yugoslavia.

racks were armed with sticks.

and well-balanced" a draft

foreign minister, whose coun-

try occupies the OSCE's rota-

Mr Primakov, in the latest

sign that Russia is edging

away from its hitherto pro-

Armenian position, called the

plan a "compromise between

extremes" and deplored the

fact that both sides were

"sticking to maximalist

bave not been disclosed, but it

Details of the OSCE plan

ting presidency.

positions.

counter to the PP's guiding principle of no discrimination among Spain's regions, underlined the acute difficulties facing the centre-right leader, Mr José María Aznar, as he searches for allies to enable

parliamentary spokesman who has been appointed by Mr Aznar as chief negotiator with the Catalan nationalists, said that talks on creating a stable majority could take several

had planned with trade unions toral win - to establish a social pact for wage moderation and job creation.

the political stalemate hy keeping its key intervention rate unchanged at 8.75 per cent yesterday at its 10-day anction for bank

Prior to Sunday's election, the markets had confidently expected that the central bank

a formal cessation of hostili-

have included the status of the

Lachin corridor, which links

Karahakh with Armenia

Turkish officials and husi-

venture, but they have since fallen out in a hig way.

some of the harshest attacks

It goes without saying that

Oil may smooth way for Karabakh peace voice to calls for an early setpeace plan which was presented to both sides this week by Mr Flavio Cotti, the Swiss recognising the ultimate juris-

Ceyhan in southern Turkey as the main terminal for the oil

which will soon start flowing

proper, and the strategic town from the Caspian Sea in huge of Shusha, the highest point of quantities. the mountainous enclave. A settlement of the conflict, Azerbaijan has said it would in which at least 20,000 people accept a multinational force in have heen killed, is needed Lachin, with a mandate to both to inspire confidence in the western companies which would build and finance the stem the flow of armaments to the Karabakh Armenians, but not the continuation of de facto pipeline, and because the war zone itself is one of the most Armenian control.

promising routes.

# Italian film mogul projects bigger image

The Rome apartment of Vittorio Cecchi Gori doubles as a cinema, entirely in keeping with his status as Italy's higgest film producer and distributor.

The partition wall with the dlning room screes as a screen; the black velvet divans are turned away from a magnificent view of the ancient city to become front stalls; and from behind a desk a Tibetan THE FINANCIAL TIMES

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scroll painting lowers auto-matically to reveal a projector. The stocky Mr Cecchi Gori, 53, is responsible for producing three-quarters of all films made in Italy, thanks to a business built by his father, Mario, who died in 1993. Films are his first passion and the core of the Cecchi Gori group's

L270bn (£113m) turnover.

But he has hig amhitions well outside the film husiness. This he has just demonstrated by scooping the television rights to Italy's league soccer for the next three years for L639bn from beneath the nosc of the Ral state broadcaster. Football, he bopes, will secure a good audience share for Telemontecarlo and Videomusic. two small channels he bought last year. On his own admission he is

riding the crest of a wave. "This is a wonderful period for me," he confessed last weekend after winning the TV foot ball rights. "My beart is set on winning the Oscar for B Pos-tino which will be decided on March 25.... Then I've won the football on TV: my own television stations are taking off and Fiorentina [the football cloh he owns] is in great

He has always lived so much in his father's shadow that it has only been possible for outsiders to measure the size of his amhition in the past two years. The evidence has gone surprisingly unrecognised in the Italian press.



Vittorio Cecchi Gori: ambitions well outside the film business

1990 - an essential high profile possession of Italian magnates; he is married to Rita Rusic, a platinum blond starlet (whose business judgment he relies npon heavily); and he became a senator for the former christian democrat Popular party (PPI) in 1994.

When he bought his televislon stations last year, the Penta, a joint film/television

potential conflict of interest with his being a senator was never raised. In the case of former premier Mr Silvio Berlusconi, the conflict of interest with his Fininvest media empire became an important politics. The two men started ont as friends and set up

on Mr Cecchi Gori's foothali conp have come from the Berluscopi camp (which also lost ont in the hidding). They accuse Mr Cecchi Gori of backing the political ambitions of Mr Lamberto Dini, the caretaker prime minister, and of being protected by the government. He has also heen accused of using his own chan-nels to defend his acquisition of the soccer rights. And a consumers' group has complained that, as owner of a major league team, Mr Cecchi Gori was both judge and beneficlary of the rights anction that could be worth L1,251bn over the next three seasons. The 38 clubs in the football league appear to have made their choice on cash alone, opt-

ing for the highest sum on offer. Mr Cecchi Gori's two channels cover only 75 per cent of the mainland and islands, and accounted for only 2.7 per cent of the total television advertising revennes of L3,555hn last year. isic, which specialises in ynnth programmes and music, and Telemontecarlo, a general channel, generated total income of less than L150bn in 1994.

The Rai claims such small fry lack the technical and financial resources to serve the Italian public with their most popular sports fare. Mr Cecchi Gori sees matters

than L150bn for the loss-making channels, and assumed some L100hn more in deht, pushing group indebtedness to L220bn. Most of the Telemontecarlo purchase was funded with a L60bn bank loan guaranteed by the station's shares and financed through cash flow from his group controlled through the family holding Finma which made a net profit of L25bn in 1994. To raise his share of the market, Mr Cecchi Gori is exploiting his film library, the blggest in Italy. Not needing

differently. He bas acquired two television concessions

cheaply: he paid little more

splash out on sport which he regards as crocial for boosting andiences. With good films and top quality sport, he reckons to raise his share of the audience to 10-15 per cent. If Mr Berinsconi's three channels, with 45 per cent of the andience, have heen valued at around L7,000hn, then Mr Cecchi Gori's unprecedented spending on football rights is easier to

understand. But he will have to sell on some local rights, ensure national territory is covered, and probably tie np a deal with a foreign partner. Otherwise he will be vulnerable in a market that he is helping to make more competitive.

Robert Graham

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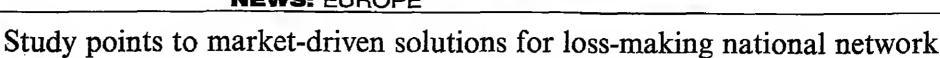
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THE SECOND



# French railways report angers unions

By Andrew Jack In Paris

One of the unions behind last year's French train strikes yesterday attacked a government report on the future of the railway system for its "liberal vision of free competition. social sacrifices and deregu-

The Communist-backed CGT. with many railway workers among its members, helped lead the demonstrations which paralysed the country last November and December. It accused the report of "forget-

which raised questions about "uncertainties" in the document - suggests there will be fierce debate in the run-up to the signing of a new contract this summer hetween the SNCF railway company and

the government. The conclusions of a working party set up by the govern-ment and chaired by Mr Claude Martinand, head of economic and international affairs at the transport ministry, were published on Monday. Summarised as "20 questions

Its reaction - and that of the be at the centre of intense dis- with the government last more moderate CFDT union, cussions over the coming months.

While offering no answers, they are clearly pointing towards more market-driven solutions in the future.

The subject is particularly topical because the state-controlled SNCF issued its 1995 results only at the end of last month. They showed a loss of FFr16.6bn (\$3.3bn), more than twice the 1994 level, with turnover down 3.9 per cent and gross operating margins 20 per cent lower than in the previous

The SNCF was due to agree

December a new contract setting out its objectives for the coming years. But ministers' attempts last November to remove the early retirement rights of train drivers as part

contract was postpooed. Ms Anne-Marie Couderc, junior minister for transport, stressed in a receot interview that the Martinand report would form the basis for discussions ahead of the new contract, in accordance with union demands and a decision by Mr Jean Mattéoli, the negotiator

of its social security reforms

confused the debate, and the

strikes last year.

The report says the strength of the railways in the nineteenth ceotury has declined in the face of the growth of car travel, the rise of individualism and the evolution of soci-

It questions the relationship between the state, regional authorities and the SNCF, and asks whether there should be greater actonomy at the local level. It suggests it may be necessary to define a maximum grant - such as FFr1 per passenger-kilometre - for expenditure in the interests of regional

It discusses reforms to pricing, corporate organisation and performance indicators such as aervice quality, financial results and productivity. It also calls for consideration of ways ensure that current high levels of debt are avoided in future.

The report suggests that the French railway system is in better shape than many of its counterparts in other countries, but that in absolute terms it remains worrying. It points out that despite heavy investment usage is declining and operating deficits are

## Domestic film industry attracts growing loyalty

By Andrew Jack in Paris

The French were more loyal to their own country's films in 1995 than dur-ing any year since 1990, according to figures released by the ministry of

culture yesterday. Nearly 46m cinema-goers last year out of a total of 130m went to see French films, giving its own produc-tions 35.4 per cent of the market, compared with just 28.2 per cent in

That came against a backdrop of

cinema attendances up 4.1 per cent. and cinema receipts up 5.1 per cent to FFr4.5hn (\$880m), despite a modest rise in the average ticket price from FFr34.46 in 1994 to FFr34.77 last

Seven of the 15 most widely-viewed films during the year were French. while the share of US films dropped from 60.5 per cent to 54.2 per cent. The previous highest market share held by French films was 37.5 per

cent in 1990. The news will boost the country's film industry, which has long been frustrated by the dominance of US films, despite its small share of the

Mr Philippe Douste-Blazy, minister of culture, said much of the success was due to comedies, including Les Anges Gardiens, Gaucon Maudit, Les Trois Frères and Le Bonheur est dans

le Pré He also highlighted the popularity of films such as Le Hussard sur le Toit, Elisa and La Hoine, a portrayal of life in a troubled Parisian soburb which has received critical acclaim in France and elsewhere.

France provides financial incentives to help the national film-making industry, including redistribution of part of the income from cinema tickets and a requirement for television companies to fund and broadcast the country's own films.

It has been at the forefront of the battle to introduce quotas elsewhere in Europe, and has also helped to support the country's cinemas hy restricting the days on which televithey do not conflict with the days when new films are released.

Recognising that the French language limits its attraction in Englishspeaking and other foreign markets, it is discussing more widespread use of duhbing. Subtitled films only ever

reach a minority audience. The oational figures hide considerable regional variations. While cinema-going has risen outside Paris, the nation's capital has witnessed a decline since 1990.

## Michael Wong had the urge to be compacted.



Michael Wong of Creative Pacific had a vision. A computer work station that squeezed component space down to nothing while, at the same time, increasing productivity.

So he went to Taiwan where an interesting company, Plustek, showed him its newest idea: a color fax machine, color photo copier, scanner and OCR, all designed in a one-button unit no larger than a shoe box.

Creative Pacific decided to sell it in Australia, but in 30 other countries it is marketed as the Scanfx, the world's most complete multi-function scanner.

Scanfx is a perfect example why companies today like IBM, Hewlett Packard, Apple Computer and AT&T are heading for Taiwan. The attraction for them is INNOVALUE: innovation in design and manufacturing techniques which gives added-value to leading edge products.

Innovalue produced the first low-cost carbon fiber bicycle. And a new sophisticated PC video and audio editor for less than four hundred dollars.

In Taiwan, you'll find Innovalue in so many product areas. Perhaps yours.

If you're interested, reach us on the Internet. It is not just products, but ideas and especially value that are VERY WELL MADE IN TAIWAN.



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Pluatek's versatile Scanfx workhorse occupies very little space next to another National Award winner, Twinhead's Slim

Note-890CD computer.



## Vote-hungry Yeltsin talks tough on tariffs

President Boris Yeltsin is nothing if not flexible. Yesterday he provided a classic example of a politician's ideological ambivalence when he promised to protect Russia's domestic manufacturers while claiming credit for the undoubted benefits his liberalising trade policies have pro-

Mr Yeltsin's decision to bang the protectionist trade drum : appears part of a campaign to turn up the volume of national. ist rhetoric ahead of June's plaining about the deluge of presidential election.

In an address to industrial workers in Moscow, an agitated Mr Yeltsin denounced a "fence of anti-dumping mea: own land. sures" blocking Russian textiles from the European market and conceded his government had allowed statied freedom" to

quality foreign imports. We cannot continue to put up with a situation where our own producers are ruined and. foreign manufacturers, includ-

#### John Thornhill examines the import of the growing protectionist mood in Moscow

ing unscrupulous ones, are Mr Yelisin'a latest outburst confirms a growing protection-ist mood in Moscow.

The agriculture ministry has threatened a permanent ban on US chicken imports, saying their poor quality endangers Russians' health. The claim has provoked outrage from US congressmen - and incredulity among Russian consumers, on mangy domestic

Moreover, Mr Vladimir Panskov, finance minister, last week called for a 20 per cent average increase in import tariffs on a range of foreign goods, including cars and alcohol, to help rectify a budget shortfall.

That prompted a rebuke from European Union officials who warned that any such move could jeopardise a future free trade pact, and dash Rus sia's ambitions of joining the World Trade Organisation. But, as the political heat in

Moscow rises, it is becoming increasingly difficult to distinguish between pre-election tubthumping, crude protectionism, and legitimate economic and public policy concerns. Despite the worries in west-

ern capitals, it would be premature to suggest Russia intends to abandon the liberalised trade regime it embraced in 1992 following 70 years of economic autarky.

Yet Mr Yeltsin is doubtless mindful of the political juice that can be squeezed from attacking cheap foreign imports and protecting domes-

The most visibla conaequence of Russia's trade liberalisation has been to encourage an influx of consumer goods rarely seen in Soviet times. A new generation of rich Russians now go shopping in their German cars to buy Dutch vegetables which they eat in front of their Japanese

ese T-shirts, and Turkish leather jackets from the thousands of informal traders who have colonised many street corners. But many Russians already take the availability of these

Swiss chocolate bars, Vietnam-

goods for granted and appear affronted by displays of conspicuous consumption. A chorus of communists, nationalists, and Orthodox

church leaders has been comwestern consumer prodoct advertising - rarely in Cyrillic script - saying it makes them feel like foreigners in their Such sentiments have been

exploited by some of Russia's industrialists to justify protec-tionism. Intense lobbying from roducers, io example, led to the government imposing heavy tax increases on foreign cars, more than doubling the price of many imports. But, as yet, there is little evi-

dence that the biggest Russian manufacturer, Avtovaz, maker of the Lada car, has benefited from this hreathing space. Rather, it appears simply to have pushed up its own prices, postponing the day of reckoning when it has to tackle its unwieldy cost base.

But in some areas of Russia's trade policy, there is undoubtedly scope for a more active government role. Even some enthusiastic free-market economists argue trade liberalisation has gone too far in some instances.

"If you take the case of alcohol then there is clearly a good argument for raising import tariffs," says Mr Andars Aslund, a former adviser to the Russian government who now works at the Carnegie Endowment for International Peace. "The influx of cheap vodka has messed up Russia's taxation system and punished their own producers, which makes no

Perhaps the most startling point ahout Russia's trade. somewhat lost in the political clamour, is the extent to which liberalisation has already begun to transform large sectors of the Russian economy.

any Russian manufacturers appear to IV he moving them-selves towards the world market with astonishing speed. Last year, Russian exports to countries outside the Commonwealth of Independent States rose 25 per cent to \$64.3bn equivalent to \$500 a head.

The bulk of these exports is still accounted for by unprocessed raw materials and oil and gas but some of the fastest-growing sectors are aircraft, plastics, electrical and mechanical machinery and furniture, suggesting some Russian manufacturers are successfully adapting to the new

market conditions. Despite the surge in imports, Russia has been running a comfortable trade surplus for the past few years and has been opening up new markets in the fast-growing countries of

the far East. The chief threat now is that the rapid real appreciation of the rouble against the US dollar since last summer will take the steam out of this export growth and lower the relative cost of imports, although even that would help Russian exporters retool.

## BA attacks US-German anti-trust move

Aerospace Correspondent

British Airways yesterday attacked the decision by Lufthansa of Germany and United Airlines of the US to apply for anti-trust immunity, saying it was contrary to the spirit of a more com-

petitive airline industry. Lufthansa and United have applied to the US authorities for Immunity as part of the recently concluded "open skies" agreement between the US and Germany. US acceptance would allow the two airlines to co-ordinate their operations more closely.

Mr Robert Ayling, BA chief executive, said: "What Luithansa wants to do is reduce the level of competition by relaxing the anti-trust laws." He said he would be interested to see how the US departments of justice and transportation dealt with Lufthansa and United's applicat

While the Transportation Department had been closely involved in the open skies agreement, Mr Ayling said the Justice Department was required to promote competition. He said: "I don't think the result of this application is in any sense a certainty.

open skies accords between the US and nine other European countries. The US has said it hoped the agreement with Germany would put pres-sure on the UK to give US carriers greater access to London's Heathrow

Negotiations between the US and the UK broke down last year when the US rejected as inadequate a British proposal to allow some extra US flights to Heathrow.

Mr Ayling said, however, that the US-German pact would make no difference to the UK's position. He said:

"We have never had the slightest difficulty competing with Lufthansa." He said the number of passengers flying from Germany to London and then to North America had increased by more than 10 per cent over the past yaar. BA expected additional growth this year.

He saw no reason to amend the existing US-UK aviation treaty. "From our point of view, there doesn't seem to be an immediate justification for raising the issue again. The United Kingdom is in a strong negotiating position with the US in that we are parties to a liberal bilateral agree-

ment, or as liberal as it can be, given that Heathrow is a full airport.' The current treaty, known as Bermoda IL had resulted in strong competition in the UK-US market and the lowest fares in history. "You might say it is a model agreement." Mr

Avling said. There was a limit to the number of flights that could be made to and from Heathrow. It was important that Heathrow remained "identified as part of the United Kingdom's national interest rather than that of the US or

other countries." See BA staff TV, UK News

## Major steps up pitch for east Asia investment

Mr John Major, Britain's prime minister, yesterday stepped up his pitch for investment in the UK by the emerging economies of east Asia, and announced a series of agreements between British and South Korean companies totalling around \$90m. Concluding an Asian tour, Mr Major met President Kim Young Sam of South Korea and

attended trade promotions. In a speech to the Federation of Korean Industry, the UK prime minister said his country's low labour costs bad enhanced its position as the favoured country for Asian investment in the European Union. The UK has now overtakeo Germany, securing 40 per cent of Korean investment in Europe.

The economic reforms which I have described bave in the UK," Mr Major said. The enterprise theme is central to the Conservatives' preelection drive, emphasising the need for increasing competitiveness with the so-called "tiger economies" and pointing out what the UK government sees as restrictive practices by many EU neighbours.

Mr Major announced that three further South Korean companies had chosen to set up operations in the UK. Fine at more than \$1bn each.

Electromechanics. Kwang Efectro Mechanics and Poong Jeon will supply parts to Samsung, the electronics giant which has pledged \$2bn total investment in the UK. The new investment, which takes the number of South Korean companies in Britain to 19, will be worth £2.5m (\$3.85m)

and create 184 jobs.

signing ceremonies for four deals between British and Sonth Korean companies: Britisb Nuclear Fuels will transfer to Hanjung the technology for making secure storage casks for spent nuclear fuel in a deal worth around \$50m; GKN Automotive, a subsidiary of the GKN group, is to form a joint venture with Hanwha Machinery for the assembly and manufacture of constant velocity joints and drive shafts,

In a deal worth £22m.
Tha other agreements included the supply of engineering and equipment for a plate mill by Davy McKee, part of Trafalgar House, for Dongkuk Steel, and snow-making equipment by a consortium of five UK companies for Daewoo

The UK could see considerably larger Korean investment Semicon and Hyundai Elec-tronics both considering establishing semiconductor plants

Mr Major also took part in

for an indoor ski centre.

the near future, with LG

## European increase of 8.3% last year with 'striking' rise in network markets IT growth strongest for 5 years

information and communications technology

The European information and communications technology last year to Ecu304bn (\$380bn), its strongest growth for five years, according to figures published today by the Frankfurtbased European Information

airport.

Technology Observatory.

Core IT products and services such as office equipment and hardware maintenance and support contributed Ecu141bn to the total, with telecommunications equipment and services accounting for the remaining Ecu162bn.

"The most striking story of 1995 has been the growth in the network market. 1995 has been the year of the network," says the Observatory's report. In particular the report notes that "the Internet has jumped the quantum leap that separates the era of traditional

simply personal usage of infor-

mation technology, to a new era when everybody will use

IT in connection with a network". Europe's share of the worldwide information and communications technology market, at 32 per cent, remained similar to previous years, although the sustained strength of the US market continued to be a striking feature.

In Europe, improving corporate profit margins were being reflected in strong growth in investment in plant, machinery and IT.

Among individual countries there was no clear correlation between gross domestic prodThe world market by region TOTAL VALUE Europe'

uct growth rates and the strength of the IT market. The

report suggests acceptance of

client/server computing and

the development of the consumer market are more important factors. For example Sweden and Germany both experienced below-average real GDP growth rates, but IT markets in both countries are showing exceptional expansion. In contrast, desplte an exceptionally high 6.5 per cent real GDP

growth rate, IT investment in

Ireland remains "rather lack-

lustre". Among individual markets the German IT market, which grew by 7.4 per cent last year and is expected to grow by 7.1 per cent this year, continues to

Germany is the blggest IT market in Europe with a 28.4 per cent share of the total. The French market "started to come back to life in 1995", but growth at 5.4 per cent remained among the weakest

14.3%

in Europe.
The UK market "continued to support the total European market with a solid 8.9 per cent expansion", although growth was expected to moderate to 7.4 per cent this year. The real rise in the UK IT software and services sector could he attributed to outsourcing. Overall, IT hardware reve-

nues increased by 8.8 per cent last year, up from 5.4 per cent the previous year, while soft-ware sales, driven by packaged products, rose by 8.9 per outperformed the overall 1T market, growing by 8.3 per cent, while network services sucb as electronic data interchange and electronic mail grew by 15.7 per cent and were expected to remain among the fastest growing segments of

the market. The western European telecommunications equipment and services market grew by 8.7 per cent last year, and is forecast to grow by 9.8 per cent this year.
As with IT, the German tele-

coms market is the largest in Europe, accounting for 26.5 per cent of the total and growing by 9 per cent last year. The UK market, one of the most liberalised in Europe, grew by 6.7 per cent last year. "With 112 Internet service providers coonecting about 800,000 people, people in the UK are also very active users of the Internet," the report

The market for telecom services in Europe totalled Ecul32bn last year and grew by 10.1 per cent, in particular by driven the rapid expansion of mobile telephony.

Observatory predicts that the total European information and communications technology market will grow to Ecu373bn by 1997, by which time the world market will be worth Ecul,065bn. EITO 1996, published by the European Information Technology Office, 069 6603-1530.

See Information Technology

Review, Section III.

WORLD TRADE NEWS DIGEST

## Grand prix tyre challenge

Bridgestone of Japan, the world's second-largest tyre maker, is to challenge Goodyear's tyre supply monopoly in Formula One grand prix motor racing, in its strategy to capture world tyre market leadership. Bridgestone claims an 18 per cent share of the \$60bn-a-year world tyre market. This is around 1 per cent less than Groupe Michelin, the world market leader. Bridgestone intends to lift its share to 20 per cent over the next several years.

next several years.

Goodyear, demoted from world tyre market leadership at the end of the 1980s by Groupe Michelin and Bridgestone, and with an estimated 17 per cent share of the market, has been the sole supplier of grand prix teams for around a decade. Bridgestone has become one of the most committed among tyre makers of using motor sport as a marketing tool. Last season it took Firestone, the US tyre maker acquired by beason it dock r resione, the OS tyre maker acquired by Bridgestone in the 1980s, back into indyCar racing – the US equivalent of grand prix - to restore the brand's image among Americans and Canadians.

Grand prix's attraction for Bridgestone is that races are beamed by TV to more than 100 countries, with claimed audiences of 100m-plus. These figures are matched only by the Olympic Games and soccer's World Cup: but the latter are held only once every four years compared with 16 times a year John Griffiths, London

#### UK support for Russia loans

The UK Export Credits Guarantee Department (ECGD) yesterday announced support for two further export credit loans for Russia. ECGD is providing repayment guarantees for the loans, worth \$9m and £6m, to help finance contracts

awarded to Kone Lifts and APV respectively.

The loans, arranged by Samuel Montagu on behalf of
Midland Bank, are to Russia's Vnesheconombank - the Russian Bank for Foreign Economic Affairs. Kone Lifts, owned by Kone of Finland, has been given responsibility by Moscow's Lomonosov State University to

design, supply and supervise the commissioning of 52 replacement elevators at the university. APV will be installing and commissioning a production line in St Petersburg to produce dairy-based baby food. Foreign Staff, Lo

#### **WTO sets dispute panels**

The World Trade Organisation yesterday set up two independent dispute panels to hear complaints from Costa Rica against the US on textiles and from the Philippines against Brazil on desiccated coconut.

Costa Rica is challenging quotas imposed last year on its exports of underwear to the US. The WTO's textiles accord, which requires a 10-year phase-out of import curbs, allows new restrictions only if imports are causing or threatening "serious damage" to the domestic industry. In the other dispute the Philippines argues that anti-

subsidy duties of more than 120 per cent imposed by Brazil on its exports of desiccated coconut are not justified under fair trade rules. The WTO's dispute settlement body has set up 11 panels so far, out of the 29 complaints brought to the world trade watchdog since its creation last year. Four disputes have been officially withdrawn.

 Saudi Aramco is buying three 29-passenger Dash 8 turbo prop aircraft worth \$30m from Bombardier, the Canadian aerospace and transit group, for delivery late this year. They are designed for short gravel and sand airstrips and to operate Robert Gibbens, Montreal in high temperatures.

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#### **NEWS:** INTERNATIONAL

# Hamas threatened by its own divisions

The military wing is acting against the goals of the political wing, writes Julian Ozanne

**A.** ics has brought to a head a crisis inside the extremist Hamas movement and sparked an international camusign to crush the organisation's external financial life-

They have also revealed that, like the relationship between the Irish Republican Army and its political wing, Sinn Fein, the military wing of Hamas operates independently and often contrary to the immedi-

ate goals of the political wing. The political leaders of Hamas, which opposes peace with Israel, were yesterday desperately seeking to impose their authority on the movement's underground military wiogs to safeguard the survival of Hamas as a political, religious and social organisa-

Dismayed senior Hamas political figures condemned the suicide bombings which claimed at least 57 lives in eight days and were considering issuing a fatwa, or religrous edict, against further attacks. The unprecedented step marked the concern among the political leadership that they have lost control over the In: cl-Deen al-Qassani Brigades, Hamas' military

The Gaza-based Qassam yes-terday heeded the political

July, halting all attacks if Israel agreed not to attack its activists.

But it was unclear whether more extremist factions based in the West Bank would obey the ceasefire, the third in the past 10 days. The last truce, declared by Qassam on Sunday was broken 24 hours later by extremist cells in the West Bank who carried out Monday's suicide bombing in the heart of commercial Tel Aviv. Hamas was founded in 1987

by clergyman Sheikh Ahmed Yassin as an offshoot of the Moslem Brotherbood, a Pan Arab Islamist movement. It originally had the support of Israel as a counterweight to Mr Yassir Arafat's Palestine Liberation Organisation, but soon joined the intifada, or uprising against Israel, and became the most violent Palestinian fac-

In 1989 Sheikh Yassin was jailed for life by Israel for setting up Hamas and for responsibility for the kidnap and killing of two Israeli soldiers. After Shcikh Yassin's arrest, the movement separated the political and military wings and went underground. Yesterday's effort by Hamas

politicians to end the violence is a recognition of gathering international efforts, led by Israel and the US to strike

The spate of bombings in leadership and announced a against Hamas' activities ments in the Arab world, much Israel by Islamist fanat conditional ceasefira until abroad, particularly in of Hamas's strength comes Jordan, Syria and the US.

According lo senior diplomats, US President Bill Clinton on Monday sent stronglyworded letters to Mr Arafat. Syrian President Hafez al-Assad and Jordan's King Hussein, urging them to close down Hamas's operations. he US moves follow

advice from senior Israeli intelligence offi-cials that attacks have been ordered from ontside, and the only way to defeat Hamas terrorism is to cut off its external finance worth up to \$70m a year. "When we speak today of how to fight Hamas, first we must stop the money," a senior Israeli military official said last

Jordan is the most likely

first step for a move against Hamas. Mr Ibrahim Ghoshe, a prominent Hamas leader, uses the beadquarters of the kingdom's Islamist movement as a conduit for funds from abroad. Moves against Hamas's external support could be devastating for the movement and the political leadership understands this. Recent Hamas documents confiscated by Israel warned about the danger to the movement from a discontinuation of largely private assistance from abroad.

from an extensive network of Islamic schools, clinics, adult education centres and social welfare programmes for the poor which ofteo deliver better services than the Palestinian Authority.

"Hamas is ready today to compromise on military attacks to preserve its civilian infrastructure," the Israeli military official said.

The confiscated Hamas documents argued for a shift in tacties in favour of political accommodation with Mr Arafat and the formation of a political party. Moderates in Hamas's political leadership began talks with Mr Arafat, and attacks against Israel were unofficially suspended for

But the extremists who largely control the military wing and dominate the external leadership vetoed Mr Arafat's demand that Hamas surrender its weapons and abandon the armed struggle; Hamas eventually boycotted the January Palestinian elec-

The failure of talks with Mr Arafat strengthened the hands of Hamas extremists. Israel's killing of Hamas master bombmaker Yayha Ayyasb ("The Engineer"), in January also sabotaged the ability of moder-Like many Islamist move- ate political leaders to restrain



Stopping traffic: An Israeli army reservist mans a roadblock between the West Bank and Jerusalem

Monday's Tel Aviv bombing

divided will be a much greater threat to peace and security was a warning that Hamas than Hamas united.

## **African nations** set to outlaw nuclear weapons

By Frances Williams In Geneva

Government leaders and ministers from all 53 African countries are set to sign a treaty outlawing nuclear weapons throughout the continent next month.

African diplomats said yesterday they hoped the accord, which was drafted with United Nations support, could serve as a model for an eventoal nuclear weapons-free zone in the neighbouring Middle East.

"We want the treaty to encourage people in the Middle East to go this way. Then Africa can be truly sure of its security," said Mr Jacob Selebi. South Africa's ambassador to

the UN in Geneva. The African Nuclear-Weapon-Free Zone Treaty, also known as the treaty of Pelindaba, is the third regional pact barring nuclear weapons, fol-lowing those covering Latin America and the South Pacific. The Pelindaba accord com-

mits countries to renounce the development, acquisition, testing or stationing of nuclear arms on their territory. It also prohibits the dumping of imported radioactive waste. In addition, the five declared nuclear-weapons states - the US, Russia, France, Britain and

China - have been asked to

sign two treaty protocols guaranteeing not to attack treaty memhers with nuclear weapons or to carry out nuclear tests in the region. They have not yet given a

firm response to their invita-tions to next month's ceremony in Cairo, but Mr Selebl said yesterday he was "very confident" all five would sign. A third protocol commits France and Spain to observe the treaty for their own territories in Africa.

Mr Sola Ogunbanwo, a UN official who advised on the treaty, said the first moves towards denuclearisation of Africa in the early 1960s were sparked by French atomic tests in the Sahara desert.

destroy its six atomic warbeads and join the Nuclear Non-Proliferation Treaty paved the way for the conclusion of the African pact in Pelindaba near Pretoria in 1995.

The treaty, which will come into force after ratifications by 28 African nations, allows members to decide for themselves whether to allow visits or transit by foreign ships and aircraft which may be carrying

#### Olympic committee sacks marketing group Sydney games chief quits

The International Olympic Committee has sacked ISL, its long-time marketing and promotions company. After this snmmer, the IOC will bandle the multi-billion dollar sales of broadcast and sponsorship rights internally.

The move ends a 13-year relationship with a company which has engineered the IOC's transformation from a financially strapped organisation to a body with revenues equal to some multi-national corporations.

ISL, based in Lucerne, Switzerland,

handles promotions and marketing for some of the world's leading sporting organisations including Fifa, football's governing body, and the International Amateur Athletics Federation. It was also responsible for the sale of sponsorship rights for this summer's European

football championships in England. Revenues raised by the IOC for this summer's Atlanta Games include more than \$1bn from the sale of sponsorship rights and \$1.4hn from the sale of broadcast rights. By comparison revenues from the 1980 Moscow Olympics

were \$150m to \$160m from the sale of sorship and broadcast rights. Mr Michael Payne, marketing director for the IOC in Lausanne, said that after the Atlanta Olympics this summer, ISL will not handle either sponsorship services - logistical support for sponsored promotions in connection - or the IOC's co-ordinathe Olympics

tion with the 200-odd National Olympic Committees. He said the IOC had reviewed its relationship with ISL because both corporate stances and the individual national Olympic committees have

become more sophisticated about the marketing potential of the Olympic

"We bave worked with ISL for 12 or 13 years and it became apparent that on the client service side, the dialogue was increasingly between the sponsors and the IOC directly," Mr Payne said. "The sponsors wanted to have the big strategic discussions directly with the 10C," he explained.

The IOC will complete the sale of sponsorship rights for the 1998 Winter Olympics in Nagano, Japan and the 2000 Summer Olympics in Sydney. probably before the end of the summer, Mr Payne said. After that ISL will no longer have any involvement in IOC marketing and promotions except for specific projects. The IOC might continne to use ISL's research division.

Mr Payne said the IOC now had the

sophistication to do much of the sale of sponsorship and broadcast rights itself. For instance, IOC members personally negobiated the sale of broadcast rights for the Olympics from 1998 through to 2008, an agreement which for the first time allows the organisation to share in advertising revenues.

An ISL official in Switzerland said

company's relationship with the IOC was being "redefined" at ISL's suggestion. "The programme has matured. What people didn't think could be done

has been done," he said.

ISL was formed in 1983 by the late
Mr Horst Dassler, one of the family
owners of the Adidas sporting goods company. Dentsn, Japan's largest advertising company, beld a 20 per cent stake until last year when the majority shareholders, the Dassler family, reduced that stake to 10 per cent.

By Nikki Tait in Sydney Mr Gary Pemberton, the

Australian businessman, yesterday announced be was quitting as chairman of the Sydney Organising Committee for the Olympic Games, due to be held in the city in 2000. This prompted speculation that his departure reflected disagreement with the New South Wales Labor government or

Committee over who should have the European broadcasting rights for the games. But Mr Pemberton, who also chairs Qantas, the recently privatised airline, said the decision was for personal and busi-

ness reasons.

with the International Olympic

replaced by Mr John Iliffe, chairman of Woolworths, one

of Australia's biggest retailers, and also of GIO Australia, the insurer. Mr Pemberton's departure is the latest in a series of changes in the committee. After Sydney won the bld, the committee had difficulty finding a chief executive. A couple of headhunted candidates fell away at the eleventh hour, and Mr

chair the committee. More recently, the 10C awarded the television rights to the European Broadcasting Union for US\$350m (5233m), rejecting a US\$500m offer from

Pemberton was obliged tempo-

rarily to do this job as well as

Mr Pemberton will be a consortium led by Mr Rupert eplaced by Mr John Iliffe, Murdoch's News Corporation. hairman of Woolworths, one lt said the EBU had proved over time that it could provide "as much exposure as is possi-

> Both Mr Pemberton and Mr Michael Knight, the state government's Olympica minister, said they were disappointed at the decision. In a letter to committee

directors. Mr Pemberton said he had disagreed with the 1OC over what role he should play in the negotiations for TV rights. But he subsequently stressed disagreement over this issue would not have any wider impact on the relationship between the organisa-

in the Sahara desert.
Subsequent progress was blocked by South Africa's hid to become a nuclear power.

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January ......

# Cuba trade bill to spur legal action

By Afshin Molavi in Washington

Several big companies and thousands of Cuban-Americans are lining up to flood Miami courts with law suits as the US Congress prepares to send a tough anti-Cuba trade bill to President Bill Clinton, according to lawyers and officials

darity Act, expacted to be signed by Mr Clinton next week, allows US citizens, particularly naturalised Cuban-Americans, to sue foreign companies operating or trading with Cuba if it can be proved that they have profited from expropriated land.

Cuban-American claims alone could reach a total of \$94bn, according to Miss Wendy Sberman, a State Department official, while US courts could face nearly \$2bn in administrative expenses. said Mr Robert Muse, a lawyer who has been following the bill. Some potential claimants hope to be compensated for land expropriated as far back as Fidel Castro's revolution in

A little-noticed provision of the bill also allows non-Ameri- nies investing in Cuba on the can companies or citizens to set up a US holding company in Miami with the sole purpose of filing law suits. If a company was deemed to be violating the law, which includes trading or investing in expro- Mexico.

priated property, its executives could also be denied US visas. "Miami lawyers are in for a loge, a St Louis-based Cuban-

boon," said Mr Lewis F. Des-American businessmen, wbo argued that a powerful group of wealthy Cuban-American exiles and big business influ-enced the US Congress to proceed with the legislation.

who have been tracking the legislation. The Senate approved the bill yesterday.

The Cuba Liberty and Solicraft flown by a Miami-based anti-communist group.

Mr Jesse Helms, Senate foreign relations committee chairman, has vigorously pushed the bill, leading to criticism that he has been heavily influencad by Cuban-American fund-raising groups and the Bermuda-based Bacardi Rum Company, which, they say. stands to gain from the legislation. Bacardi is a big campaign contributor to Mr Helms. Another company that could gain is Chiquita Brands International, which operated in Cuba as United Fruit.

The European Union attacked the legislation. "We condemn in the strongest possible terms specific provisions of the bill which run the risk of putting non-American compawrong side of American jus-

tice," an EU spokesman said. Mr Art Eggleton, Canada's trade minister, said the bill would violate Nafta, which groups the US, Canada and

## **Factory orders** likely to boost US economy

The US economy may rebound this spring, strong figures for factory orders indicated yester-

The Commerce Department said new orders for manufactured goods rose 0.5 per cent in January, reflecting strength in the technology sector. Officials also released revised figures. for December, showing a gain of 1.7 per cent rather than 1.3 per cant as previously

reported.
The figures were considerably stronger than expected in financial markets, where analysts had predicted a fall in orders of 0.3 per cent, reflecting the impact of severe

winter storms. Orders rose despite weakness in the volatile transport sector. which was pulled down by an erratic 11.8 per cent decline in aircraft orders. Excluding transport, orders rose 1.5 per cent in January. The strongest sector – industrial machinery and equipment - registered a gain of 5.7 per cent from

The economy was likely to "snap back" in the spring and grow at an annual rate of about 2 per cent, said Ms Diane Swonk, a senior economist at First National Bank of Chicago. However, the first quarter was likely to be even more depressed than the final period of last year, with annualised growth of less than 1 per cent. Ms Swonk said the Federal Reserve was likely to cut interest rates again despite the rebound because wage and price inflation remained subdued. Rates could be cut a quarter point later this month and by a further half point during the summer, she predicted

The orders figures showed encouraging strength in capital goods. Excluding aircraft and defence industries, new orders for capital goods - a guide to civilian investment trends rose 3.3 per cent in January, reversing falls in preceding

The harsh winter weather in January mainly affected shipments of orders, which fell 0.9 per cant following a 0.7 per cent gain in December.

# Prospectuses in US 'unreadable'

Prospectness issued hy companies raising capital in the US should be simplified and made more intelligible, a Securities and Exchange Commission task force urged yesterday. The suggestions are part of a wider debate on SEC regulation of the US securities markets, writes Maggie Urry in

The task force on disclosure simplification, aet np last Angust, concluded that although the regulatory structure had served the market well for over 60 years, it "should be rethought in the age of novel financial instruments and virtually instantaneous electronic information

and clearance". its report put forward 140 recommendations to remove unnecessary regulations, make disclosures more readable and to reduce the cost of raising capital in the US. These should cut the regulatory burden and the cost of compliance "without reducing the transparency and integrity of our capital

markets," the task force said. The task force found that prospectuses were often "tur-gid, opaque and unreadable." It suggested a new format for the opening pages of a prospectus which should "answer the more common questions asked hy investors". The task force urged the SEC "to con-tinne its plain-English initia-tives" to make disclosures "concise and more readable".

It recommended the repeal or reform of 81 rules and 22 forms, which would eliminate or modify 25 per cent of the rules and 50 per cent of the forms that it had reviewed.

Other recommendations would make it easier for small companies to gain access to the capital markets. At present only large companies can use the shelf-registration system, under which companies register an offer of securities without setting a date so that they can issue them at short notice to take advantage of favourable market conditions.

The task force snggests extending shelf-registration to smaller companies with a 12month record of filing public reports. This would allow a further 4,800 companies to

make shelf registrations. Under the proposals, tender offers involving an offer of securities would be put on a similar basis to cash tender offers. These offers, often made in takeovers, would mean if a company offers to huy another for shares rather than cash it would not have to wait while the new shares were being registered before starting the offer.

#### **NEWS:** THE AMERICAS

## Argentina senses hardening UK position

By David Pilling in Buenos Aires

Britain's decision to charge Argentine vessels a licence fee for fishing around South Georgia may reveal "a general hardening of attitude" towards Buenos Aires, officials at the Argentine foreign ministry said yesterday.

The ministry, which yesterday delivered a formal letter of protest to the British embassy, said Argentineflagged ships had always fished unhindered around South Georgia, an uninhabited UK dependency in the South Atlantic.

The fact that an Argentine-regis-

Cardoso: tackling problems

tered ship had last week heen charged a £70,000 (\$107,000) fee showed that "apparently there has been a change of British policy [towards Argentina]," an official said. "We hope this does not mean a

general hardening of attitude." Argentina, which disputes UK sovereignty over South Georgia, will advise its ships not to pay for Sonth Georgian fishing licences. However, officials stressed Buenos Aires was not seeking to provoke an incident. military or otherwise. The British Royal navy frigate HMS Northumberland is currently patrolling Sonth Georgia alongside the Cordella, a

Falklands fishing patrol vessel.

The British embassy in Bnenos Aires denied it had hardened its stance. "There is no change of policy towards either the Falklands or South Georgia," it said. "The charging of licences is perfectly in accordance with the regulations of the Convention for the Conservation of Antarctic Marine Living Resonrces (CCAMLR). We are doing this in the

interests of conservation." South Georgian anthorities, which operate from the disputed Falkland islands, have since 1993 issued licences to vessels of several nations.

has previously turned a hlind eye to Argentine fishing around Sonth Georgia, but has now decided to enforce regulations more strictly.

Fishing vessels go to South Georgia, 800 miles southeast of the Falklands, mainly to catch toothfish, which fetch high prices in Japan and Europe.

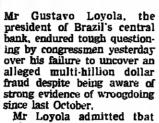
The 21-nation CCAMLR uses scientific research to determine an annual total allowable catch, this year of 4,000 tonnes. CCAMLR does not set licences, but leaves it np to individ-ual states to control their own vesbut never to Argentine-flagged ships. sels. Last year, CCAMLR set an

estimates that more than 6,000 tonnes were actually caught.

 Argentina saw retail prices fall in February for the fifth time in the past 12 months, bringing 12-month inflation to just 0.3 per cent - a record low. February prices dropped 0.3 per

Some economists are concerned that Argentina, once wracked by hyperinflation, is in danger of entering a deflationary spiral. The fact that prices fell in February appears economy will only climh gradually

# Brazil bank chief grilled over fraud



he first suspected the existence of fraud at Banco Nacional after a meeting with its con-trolling sharebolders on October 5 last year. However, he denied recent press reports that the controllers bad ad-

mitted committing any crime. Banco Nacional, one of Brazil's biggest private-sector banks, was taken over by the central bank last November after running into insurmountable liquidity difficulties.

Mr Loyola said it was clear by October that the bank could not survive and would bave to

The central bank took over Nacional's debts and sold its healtby assets to another big bank, Unibanco. Mr Loyola appeared to have

staved off calls for a full parliamentary commission of inquiry into the affair. The government is keen to

avoid such a probe as it would divert congress's attention from essential structural reforms.

It could also embarrass the central bank, whose ability to sopervise the banking industry has been criticised by analysts and politicians. Congress ear-lier agreed to forgo a full inquiry in return for an expla-

nation from Mr Loyola. President Fernando Henrique Cardoso said yesterday his government was tackling the problems of the banking sector, previously masked by Brazil's high inflation, and

"cleaning up the beritage of

Nacional had been rumoured to be in deep trouble for months before its collapse. But a report published last week by Veja, Brazil's leading news magazine, weut much further and accused the hank's controllers of fraudulently manipulating its accounts

since 1986. According to Veja. growing discrepancies between the bank's assets and liabilities were hidden by fictitious loans

to over six bundred customers. The central bank has been investigating the affair in private since last November, but was forced to comment publicly following the Veja report.

Shortly before taking control of Nacional, the central bank created a programme known as Proer to provide cheap financing for expenses in mergers and acquisitions in the bank ing industry

Congressmen accused Mr Loyola yesterday of creating Proer for the sole reason of devoting public funds to saving Banco Nacional.

Mr Loyola argued that Proer was created to safeguard the interests of depositors rather

than of banks or bankers. However, be admitted that the entire \$5.8bn lent under the system so far went to Banco



war and super successful car-navigation system on the market. ter and to make it compatible with other cars, and to develop it as

was arrive quickly, economically, safely as well as by the best When we achieve that, we it look for a new destination.



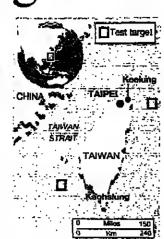
Laura Tyson in Taipei and Charles Batchelor in London

With the announcement yesterday of missile tests close to Taiwan's two largest ports. China is turning the heat on Taipei rather higher than had heen expected before the March 23 presidential election. While China had already threatened to conduct tests, they had not been expected to put trade at risk.

Talwan's stock market, which fell 1.3 per cent yesterday, has been vulnerable since tests started last summer. The central bank again pledged to support the currency at T\$27.50 to the US dollar. About \$10hn of capital flowed out of Taiwan last year, causing a tightness of domestic liquidity which aggravated the stock market's

After beavy intervention since last July, the central hank's reserves, which are among the largest in the world. have fallen from a peak of \$100bn to just below \$90hn. But the bank says it would still be comfortable if they fell as low as \$45hn-\$50hn.

The government sald last nigbt it had already taken



ensure normal sea and air transport. The closure of an air corridor used for 30 flights a Australia and the US will add perhaps 10 minutes to flying visible effect of the tests could be on shipping.
Military activity in the

Taiwan Strait would seriously disrupt shipping and could have a knock-on effect on the two large container terminals at either end of Taiwan, shipping experts warned. About 70 per cent of

the affected ports of Kaohsiung and Keelung, and other ports are too small to take the strain. This could seriously disrupt trade in March, but exporters' larger fear is that their order hooks will dwindle as customers fret about Taiwan's future ability to meet delivery dates.

The stratt is on the direct route for tankers, dry-hulk car-riers and container vessels sailing from Singapore and Hong Kong to Shanghai, South Korea and the Japanese ports. "All the biggest shipping lines use the Taiwan Strait," said Mr Keny Chou, London representative of the Yang Ming Line, a Taiwanese container group. "It would have a hig impact on shipping in the strait." Many cargoes destined for

from ocean-going vessels in Hong Kong and then moved np the Chinese coast through the Taiwan Strait. "It is a very busy route," said Mr Chris Horrocks, secretary general of the International Chamber of Ship-Shipping in the strait already has to take account of

Chinese ports are transshipped

strong currents and shallow waters. Navigation can be difficult in the typhoon season with little room to manoeuvre a large ship. Tankers use the



strait to reach offshore mooring buoys at the northern tip of Taiwan and container ships serving Kaohslung to the south and Reelung to the north of the island also pass through it.

third largest container port after Hong Kong and Singa-pore, handling 4.6m containers in 1993, according to Containerisation International Yearbook rankings, Keelung ranked 13th

attend a reunion at Cornell university

Beijing recalled its amhassador from

Washington, froze most official contacts

and embarked on a campaign of intimi-

Yesterday's announcement by Beijing

has heightened unease on the island long accustomed to living under a slege

mentality. There are concerns that with the tests taking place so near to its shores, there could be some sort of mis-calculation. As one Taipei-based foreign

investment banker joked: "I'd feel much

safer if they were aiming at us instead

dation against Taiwan.

### budget deficits By Tony Walker in Beijing China will seek to eliminate

Beijing to

try to end

its hadget deficit by 2000, but faces big challenges in boosting revenoes and controlling expenditures, Mr Liu Zhongli, finance minister, told the opening session of China's par-liament yesterday.

Mr Lin forecast a hudget deficit for 1996 of Yn61.4hn (\$7.4hn) or about 8 per cent down on last year's hudgeted figure. But he said the "deficit is still rather large and debt

too heavy".
He hlamed tax evasion and fraod, unpaid taxes hy struggling state enterprises and excessive spending on waste-ful capital works projects for China's continuing budgetary difficulties.

China, he said, mnst tighten the collection and management of taxes, oppose all forms of extravagance and vaste, and strive to reduce the deficit hy taking measures to expand sources of revenue and educe expenditures.

Mr Lin warned a "hnge amount of deht" was due to be repaid this year. Debt service Yn133.1hn, np Yn46.2hn on 1995. Foreign leans plus the budget deficit would take total obtigations in 1996 to Yn195.2bn, to be financed by the issue of treasury bonds.

China's revenues for 1996 are forecast at Yn687.2hn. an increase of 11.1 per cent com-pared with 1995. Expenditures are expected to reach Yn748.6hm, np 9.9 per cent on

the 1995 figure. Mr Lin said China's plans to slash tariffs to an average 23 per ceot from 35.9 per cent from April would "increase the difficulty of balancing the hndget."

China would increase defence spending this year hy 11.3 per cent to Yn70.2hn, but this represented a smaller increase than last year, when the defence hadget grew hy 14.5 per cent. Bndgeted defence spending accounts for perhaps less than half actual expenditures on the military. The services generate their own revenues from commer-cial activities. They also receive "off-budget" funds. . .

ASIA-PACIFIC NEWS DIGEST

## Thais struggle to slow economy

That economic performance in January provided mixed results for the government's plan to slow the economy and impose some discipline on the growing problem of too much short-term capital inflows. For the sixth consecutive month, the growth in private investment slowed, registering a 14.1 per cent increase year-on-year in January against 14.3 per cent in December and 14.7 per cent in November.

Import growth also slowed significantly, increasing 16.3 per

Export

cent in January against 27.9 per cent in December. Export growth remained steady at 23 per cent, leading to a trade deficit of Bt37bn (\$1.47bn), still a big contributor to the

country's current account deficit.
In December, thet deficit was Bt31.7bn, slightly below previous months, but analysts said a significant long-term downward trend is still not apparent. Growth in manufacturing increased for the fourth consecutive month, coming in at 9.8 per cent. But the main worry continues to be inflation, an annual 7.4 per cent in January. The central bank argued the increase was mainly due to rising food prices and therefore was cyclical. This has been the main explanation for rising inflation for the past 13 months. Tod Randocks. Remidely. previous months, hut analysts said a significant long-term rising inflation for the past 13 months. Ted Bardocke, Bangkok

#### Election called in Victoria

Voters in the Australian state of Victoria will go back to the polls on March 30, this time for state elections. Mr Jeff Kennett, head of the Liberal-National coalition state government, yesterday called a snap poll just three days after the conservative coalition won a sweeping victory in Australia's federal election.

Mr Kennett denied he was out to capitalise on the federal win, saying if he did not call an early election, months of destructive speculation would ensue

The Kennett government, elected in October 1992, has pursued the most aggressive privatisation programme of any of coalihon-controlled states. It has taken an axe to government spending, contracting out services and cutting jobs, but has actively promoted the state, adding tourism attractions such as this week's Grand Prix and wooling foreign

Saturday's result showed a swing against Labor in Victoria. ess marked than in Queensland or New South Wales. It would take a contrary swing of well over 7 per cent to dislodge the Nikki Tait, Sudner

#### Singapore to censor Internet

Singapore's Internet access providers will have to block out sexually-oriented and politically sensitive material, the Singapore Broadcasting Authority said yesterday. Most Internet activity would not be affected by the new

rules, but the authority said it would regulate World Wide Weh pages, and access to those based in foreign countries, that might undermine public morals, political stability or religious harmony. Pages run by Singapore political parties would have to be licensed by the government.

In Singapore, which has about 100,000 Internet users among its 3m population, the government has embraced the Internet, using it to issue press releases and official statistics.
"But we must also try to keep in check abuses in cyberspace such as pornography, hate literature sowing social and religious discords, and criminal activities." the authority

The government has already put some sites off-limits by ordering the country's three Internet access providers not to connect to news groups whose titles include "alt.sex". SingNet, an access service run by Singapore Telecom, the country's phone company, said it could keep out unwanted foreign material by blocking access to sites identified by the

# China grows more suspicious of Lee

China suspects President Lee Teng hui, who is of native Taiwanese extraction and is widely expected to win this month's presidential election, of shifting towards independence from China rather than eventual reunifica-tion, write Laura Tyson and Peter

It has subjected him to vehement public criticism since he made a private visit to the US last year. Some analysis helieve the aim of the missile tests announced yesterday may he to frighten voters into according Mr Lee a victory hut with less than 50 per cent of

the poll. That would reduce his man-

date for promoting independence. To a limited degree, the tactic worked in last December's general elections. These saw a surprisingly strong showing for the conservative New party which wants to foster close links with China. The ruling Kuomintang nationalist party scraped home with only just over half the seats in the Legislative

Others argue that Mr Lee is the only Taiwanese politician with whom China could eventually clinch a deal on reuni-fication. While It clearly wants to dis-

credit him, there is a growing view In Taipei that Beijing has also become aware of the need for quick progress on

The chance of hringing Taiwan back into the fold may ehb as democracy hecomes more entrenched and once Hong Kong reverts to mainland rule

China has said it will not rest until it has brought about reunification, and may keep up its pressure even after the

China was enraged by the US decision last year to grant Mr Lee a visa to

Mad Hatter enters Japan's loan fray

The government is becoming desperate to persuade the public, writes Gerard Baker

Japanese government's attempts to get its plan for a bailout of the country's housing loan companies through parliament look increasingly as though they might have come from the pages of Lewis Carroll's Alice

in chaotic scenes at the par-liament huilding in the past opposition have so far successfully blocked passage of the hudget that would permit the proposed public spending.

stage a kind of Mad Hatter's tea party outside the commitlee chamber, assailing government ministers who attempted to persuade them to get on

Then, in a similar spirit of surrealism, in the early hours of Tuesday morning, the increasingly desperate governing coalition parties came up with a novel plan designed to hreak the deadlock. The new proposal purports

to make concessions to official opposition and public hostility bailout to the country's banks. On closer examination, if it is to succeed, it clearly requires the Japanese public to

an attempt to assuage the almost unprecedented popular anger at the planned use of public money in the liquida-tion of the housing loan companies, which are on the point

hurdens to he horne hy the main creditors of the housing lenders, the country's hanks and agricultural co-operatives. The original plan, which was

drawn up three months ago called on the banks that founded the housing loan companies, or jusca, to write off all their Y3,500hn (\$33hn) in loans. Non-founder banks would write off YI.700hn, while the agricultural co-operatives, the higgest category of creditor. got off lightly with just

Y530hn. The remaining Y680bn would he met hy public funds. These funds are expected to cover the first-stage Y6,400bn in known losses at the jusen. Further losses, expected to reach at least Y1,200hn, would theo be covered over a 15-year period, split half and half between hanks and public

The new proposal changes none of these basic elements. despite public pressure on the

The final stares of the hreakfast. This latest twist is Instead its main component is that over a seven-year period, the banks will pay additional taxes of Y500bn. The agricul-tural co-operatives will pay an extra Y180bn. The combined sum is almost

of collapse under a pile of nonprecisely equivalent to the govperforming loans. ernment's planned contribu-The focus of the new scheme is an apparent increase in the tion to the scheme. That appears to leave the banks and the farming institutions in effect paying back the controversial Y680bn the government has agreed to pay

But the new scheme, in fact, represents nothing of the sort. The banks, It is claimed, will pay the extra tax by means of higher profits. They have pledged to restructure their operations to improve their profitability by Y1,500bn over the next seven years. That will result in higher corporation tax payments of Y500bn into the government's coffers.

gricultural co-ops will have to find savings of at least Y500hn to produce higher tax payments of Y180bn. In short, the money is to come from unspecified targeted savings made by finan-

cial institutions. There are several reasons wby the scheme is unlikely to pass the credibility test with voters. The banks are in prooperations anyway, under pressure from their own heavy hurden of non-performing loans. Any improvements would in

any case have gone partly to the government in the form of higher taxes. But more important, there is no guarantee in the proposal that hanks and agricultural co-operatives will in fact achieve improvements that will pro-

duce extra revenue for the gov-

ernment. The outlook for Japanese hanks' profits in the next few years is still bleak. The flimsiness of the pledge was underlined yesterday hy Mr Toru Hashimoto, chairman of the Federation of Bankers' Associations and president of Fuii Bank, one of the largest hanks. He told a news conference that while hanks were committed to trying to make

years, they could not possibly promise imequivocally to pay the Y500bn in higher taxes. Opposition politicians were contemptuous of what they saw as an attempt to hoodwink the electorate into backing the

savings over the next seven

"These changes amount to nothing more than an attempt to deceive the people," Mr Tak-ashi Yonezawa, secretarygeneral of the New Frontier party, the main opposition party, claimed.

Even finance ministry officials appeared nonplussed. The official view was that the ministry welcomed any moves that might improve the health of the banking system, as a bene-fit for the economy as a whole. But in private, ministry officials were scathing.

"The coalition parties obvi-ously feel it is a sensible political move, but from a financial point of view it is complete The government, in short

remains trapped between two forces. On the one hand, the public, as evidenced in opinion polls and local election results in the past few weeks, is growing ever more furious about the use of taxpayers' money to bail out what they see, at the least, as inefficient financial institutions.

But on the other, the banks that founded the jusca will not hadge from their determination not to accept any more of the cost of liquidating them. The government is adamant

that its latest scheme marks a genuine attempt to bridge the gap. But its increasingly desperate attempts to appease the public suggest it may be following a dictum of another of Alice's friends: "When I use a word," said Humpty Dumpty, "it means just what I choose it

## Patten in plea to China on HK residence rights

By John Ridding in Hong Kong overseas will have to re-regis- Major's assertion Britain

Mr Chris Patten, Governor of Hong Kong, yesterday challenged China to respond to Britain's announcement of visa-free access for Hong Kong residents hy making a guarantee on the right of abode for the territory's inhabitants.
The British government has

made a sensible and helpful decision on visa-free access, said Mr Patten, referring to Monday's announcement by Mr John Major, UK prime minister, to waive visa requirements for Hong Kong residents after next year's handover to

"Now it is for the Chinese leaders to make as rapidly as possible an equally positive decision on the right of abode

in Hong Kong after 1997."
The conditions that China attaches to the right of abode. which will also determine

whether Hong Kong residents

ter as residents of the territory, would mobilise the interna-

ahead of the handover. "It is a serious confidence issue," a Hong Kong government official said. "Not just for the local community hut also for the overseas Chinese dias-During a meeting in January

with Mr Malcolm Rifkind, UK foreign secretary, Mr Xian Xichen, his Chinese counterpart, indicated Hong Kong resideots would not need to re-register. The issue has become a subject of contention among Chinese officiais and a final decision has yet to be taken. China welcomed Mr Major's

stance on visa-free access. regarded as necessary to support free travel and the colony's position as a trade and financial centre.

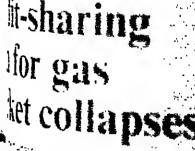
But pro-China politicians in Hong Kong and the pro-Chi-nese press have criticised Mr

tional community should Beljing hreach the terms of the 1984 Sino-British Joint Declaration on Hong Kong.

"For Major to say such a thing at this time at this place is extremely unwise and could put improving Sino-British relations under a cloud," the Ta Kung Pao newspaper said in an editorial.

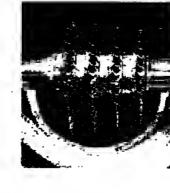
"If Britain schemes to mohilise the international community to interfere in China's affairs it will run into a stone wall." The paper often provides a platform for official Beijing

Mr Major's announcements. made during a visit to Hong Kong, marked an attempt to. reassure the colony ahead of the handover. He warned China against dissolving the Legislative Council and against tampering with buman rights





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rience in a bad year.

# Tougher law urged on 'corporate killing'

Companies would face big fines for management failures which resulted in death under a change in the manslaughter laws recommended yesterday by Britain'a Law Commission.

The government's law reform body called for a new offence of "corporate killing" comparable to killing by gross carelessness, to replace the present law on corporate manslaughter. But it backed away from recommend-ing jail sentences for directors of companies convicted of the proposed

The new law would apply equally to oil platform disaster in which there ion-UK companies operating in were 167 fatalities; and the 1988 non-UK companies operating in England and Wales and would extend to UK territorial waters, British ships and aircraft and offshore platforms.

The commission said the difficulties of holding companies responsible had been underlined by the failure of a 1991 case against P&O European Ferries following the deaths of 187 people in the 1987 Zeebrugge ferry disaster.

It said defects in the law bad allowed companies to escape prosecution following the 1987 fire at King's Cross Underground station in which 31 died; the 1988 Piper Alpha

Clapham rail crash in south London in which 35 people died.

The main reason was that under the present law, prosecutions for "corporate manslaughter" could be brought only where one person could be identified as a "controlling mind" of the company. As a result there have only been four prosecutions for corporate manslaughter under English law and only one conviction, in the 1993 Lyme Bay canoeing disaster case in south-west England in which four people died. The case,

involving a one-man company,

centre was failed for three years but last month had his sentence reduced by a year by the Appeal Court.

NEWS: UK

Under the suggested law a company would be liable to prosecution if a management failure resulted in death and that failure constituted conduct far below what could reasonably be expected of the company.

Companies convicted of corporate killing would face an unlimited fine and could be ordered to remedy the cause of the death. Fines would be set by the courts

presented no problem in ideotifying a according to the circumstances of the controlling mind who was responsible. The owner of an activity commissioner, said the fines imposed commissioner, said the fines imposed by courts under existing environmental laws might provide a bench-mark. In 1990 Shell was fined £1m for pollnting the River Mersey in north-west England.

The Confederation of British Industry, the country's biggest employers' lobby, welcomed the clarification of the law but expressed concern that many of the proposals were similar to existing bealth and safety legislation.

Editorial comment, Page 11

## **Artworks** disappear in line

By Antony Thorncroft

of duty

The Ministry of Defence has "lost" 161 of its inventory of 900 works of art. The situation has become so serious that the Government Art Collection has stopped lending works of art to the ministry.

Some pictures have gone missing because mobile military personnel tend to take their office decorations with them when they move - including paintings from the officers' mess.

There is no indication of systematic theft, according to an investigation by the National Audit Office - just "natural wastage". The value of the works gone missing is low, not much over £100,000, but some are of great historical interest and are irreplaceable.

The MoD is perhaps the richest and largest of all government ministries thanks to gifts from retired military figures, and commemorative works of battles and personalities commissioned for officers' messes.

Many of the works of art were lost during the upheavals that have affected the ministry in recent years. An 18th century painting, An Officer of the Foot, valued at £8,000, (\$12,300) disappeared when the Quartermaster General's office moved from London in 1992, while eight of a total of 10 prints transferred fron sor to the E-type" by Mr Nick England to Germany in the Scheele, Jaguar's chairman, late 1970s also went missing

The run-down in the armed forces has caused its own problems. In 1937 the Territorial Centre in Acton was presented with a painting of Richmond Hill by Cropsey. When the Unit was disbanded four former officers offered the painting for sale at Bonhams, the auction house, which valued it at £400,000. At the last moment the Territorial Army laid claim to the painting but was firced to pay Bonhams £80,000 as compensation for

loss of sale. The National Audit Office has recommended that the MoD improve its inventory records and its security.

## Visitors wash hands of oily beaches

By Roland Adburghem

Since the Sea Empress tanker ran aground off St Ann's Head near Milford Haven in Wales on February 15, spilling 72,600 tonnes of cargo, the fear has been not only of the damage to wildlife but of the impact on the local economy, especially fishing and tourism.

The region is one of the UK'a leading tourist destinations, with the county of Dyfed accounting for a quarter of all visitor nights in Wales. Pem-brokeshire – the western part of Dyfed and including Milford Haven - has Britain's only coastal national park. Annually, it attracts an estimated 6m "visitor days" and an expenditure of more than £70m

(\$107m). Even before the spillage contaminated the south Pembrokeshire coastline, the economy was under pressure. The unemployment rate in Haverfordwest was 13.8 per cent in Jannary, and in south Pembrokeshire 18.4 per cent. While the

By Haig Simonian in Geneva

Jaguar, the luxury carmaker

owned by Ford, yesterday made a strong bid to be the

star of this year's Geneva

Motor Show with its new XK8

sports car, unveiled at the

event yesterday.
Dubbed "the spiritual succes-

the XK8 is shorter but roomier

than the XJS model it replaces.

new sports car, which will go

on sale in October, continued a

sporting tradition at Jaguar

stretching back through the

E-type to the legendary pre-

war SS100.
The company expects to sell

about 12,000 XK8s in the first

year of production. That would

be more than one-fifth higher

than the peak annual sales of

the E-type and well ahead of

the best year's sales of the 21-year-old XJS.

The XK8 should help to raise

Jaguar's output to almost

43,000 cars this year from

39,000 in 1995. That would be

the highest figure recorded

Mr Scheele said the sleek

two areas - that reflects the low rural population.

Mr Roger Davies, the direc-tor of West Wales Task Force, says employment in agriculture has declined, has almost disappeared in deep-sea fishing and has stagnated in tourism. The task force is a public sector partnership set up to counter the problems caused by the rundown of the region's military bases. Mr Davies calculates that in the past four years 1,000 direct and indirect jobs have gone from military bases in the area.

About £20m a year has been lost from the local economy. Other jobs have also disappeared, notably with the closure of Dairy Crest's creamery et Whitland in 1994.

The task force claims to have belped create about 750 jobs in small and medium-size enterprises. But inward investment has been hard to achieve, although Pembrokeshire qualifies as an assisted area for government grants. Enterprise

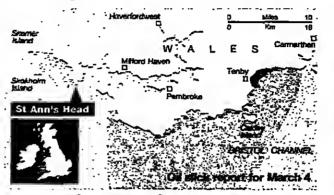
numbers of jobless are not great - a total of 5,000 in these ended in 1994 and an application for new zones was recently rejected.

The tanker disaster, says Mr Nick Alnger, opposition Labour MP for Pembroke, "couldn't have come at a worse time because this Is when people are taking decisions about where to book their bolidays. It will take a relatively sbort time to get back the natural beauty, but very difficult to get back those who book elsewhere.

While fishermen, suffering from a atatutory ban on catches, can immediately prove lost income, it will take much longer for boteliers, boliday cottage owners, caravan parks, restaurants and shops to demonstrate consequential loss. "I'm extremely concerned about what will be the size and speed of payments," Mr Ainger said. The government bas

announced a £2m bridging fund for hardship cases. "It's a gesture, but I've a feeling it will be insufficient." be said. Wales Tourist Board is seek-

Jaguar's new baby banks on tradition



OIL TYPE: Right sheen

that the south Pembrokeshire beaches will be clear of oil before the summer (although there is less certainty about the quality of bathing water).
"We are greatly beartened by the clean-up," a spokesman said. "Some of the heaches were horrific a week ago, and

are now 95 per cent clear." Another consequence of the spillage is to heighten concern about National Power's plans

ing to reassure bolidaymakers to convert a power station at Pembroke to import and burn orimulsion, the so-called "dirty fuel". The proposal exemplifies the dilemma of environment versus economy: without the conversion, jobs will be lost; with it, they will be created.

Few argue that refining itself should cease at Milford Haven, where Texaco, Gulf and Elf directly and indirectly employ about 2,000 people.

engine - the company's first V8 - the XK8 should offer "outstanding" performanca

akin to the now-discontinued V12-powered XJS, but with

much lower fuel consumption.

Prices for the new model,

which will be available as a

convertible and a coupé, have not been announced, but

are expected to be around the

top end of the range for the

Mr Scheele said the XK8

would compete directly with

the Mercedes-Benz SL range,

but would be more competitive

on price and offer equivalent -

if not better - performance,

The bulk of sales are expec-

Jaguar has made much of

the links between the XK8 and

the E-type, with a strong echo

of the earlier car's distinctive

styling, notably its oval air

Appropriately, the original

E-type was first shown to the

founder, exactly 35 years ago.

room and noise levels.

ted to be in the US.

#### freedom by moving to "trading fund" status from April 1, the government announced last night. The effect will be to remove the Met Office further from the

financial and managerial control of its parent department, the Ministry of Defence. Instead of receiving most of its funds directly from the MoD through the parliamentary vote, the Met Office will meet all running costs by selling forecasts to the MoD and other customers in the public and privete sec-

**Tourist industry** 

hits record year

A weak pound and the Northern Ireland ceasefire helped the

British tourist industry notch up a record year in 1995, with

visitor spending up by about 18 per cent, figures will reveal

Mrs Virginia Bottomley, the heritage secretary, will hail the

figures as evidence that tourism is now more important than

North Sea oil and tha financial services industry to the UK

But many in the tourist industry remain concerned that

Brtain is failing to increase its market share of world tourism.

and they believe more government spending on overseas pro-

Figures from the Central Statistical Office will show that

The annual figures will also show an increase of some 12 per

George Parker, Westminster

Chris Tighe, Newcastle upon Tyne

cent in the number of visitors to Britain - the largest jump in recent years. The total number of visitors in 1995 is expected

Beleaguered shipyard wins order

Swan Hunter, the Tyneside shipbuilder saved in June after

two years in receivership, will today announce its first sub-stantial order, which will provide work for 1.300 people.

The company, owned by Dutch businessman Mr Jaap

Kroese, has won a multi-million pound contract to convert a

330m-long, 90,000-tonne bulk carrier, Solitaire, into the world's

The contract, awarded by Dutch-based Allseas, is a break-

through for Swan Hunter's new management, which bought

the company's main Wallsend yard and its name for about

£4m just days before an auction of its machinery would have

Swans' confirmation of the order, signed on Friday after

months of negotiation, coincided with news yesterday from

VSEL, based in Barrow-in-Furness, Cumbria, that it has won

its first merchant shipbuilding order for more than 20 years.

been shed next month, VSEL will build two tankers for ship-

owners James Fisher and Sons. The order was won against

competition from the Far East, Turkey, the Netherlands and

Britain's Meteorological Office is to gain extra commercial

Weather service funding shift

In a £14.75m deal that will save 60 jobs which were to have

visitor spending in the UK in 1995 was about £11.8bn (\$18.2bn),

motion is vital.

up from £10bn in 1994.

biggest pipelaying vessel.

made its demise inevitable.

be about 23.5m. up from 21m.

As a business it will have revenues of about £150m a year. lts asset base is just over £100m (of more than half represents the UK share of international weather satellites).

About 15 government agencies are already operating as trading funds, from the Royal Mint to the Defence Evaluation Clive Cookson, Science Editor and Research Agency.

#### Nadir video link blocked

An attempt to allow Mr Asil Nadir, the former Polly Peck chairman, to give evidence by live video link from northern Cyprus in the Old Bailey trial of Mrs Elizabeth Forsyth, his personal assistant, was blocked yesterday by Mr Justice Tucker, the trial judge. He said the law only allowed video links to be used in cases where perjury proceedings could later he brought against witnesses if necessary. This was not possible with Mr Nadir in northern Cyprus.

Mrs Forsyth denies two charges claiming she handled £395,000 allegedly stolen from Polly Peck by Mr Nadir. Mr Nadir has remained in northern Cyprus since leaving Britain

#### Oil exploration set to rise

A survey of senior oil industry executives shows that capital spending on exploration activities in the UK is expected to rise

this year even if oil prices remain relatively soft.

The survey, carried out by Arthur Andersen, the accountants and consultants, showed 57 per cent of respondents plan to increase exploration spending. It was less clear whether there would be a rise in North Sea development expenditure, however, with respondents divided equally between an

increase and a decrease.

Respondents were particularly optimistic about prospects in

## **Profit-sharing** plan for gas market collapses

Robert Corzine in London

An attempt to introduce consumer profit-sharing into the domestic gas industry has foundered, with British Gas and industry regulator Ofgas at loggerheads over how such a mechanism should work.

Possible profit-sharing arrangements heve baan included in discussions under way between the company and the regulator on e new price control formula for TransCo. the pipeline monopoly which accounts for the bulk of British Gas' revenues. But the two sides have adopted opposing approaches to the issue, and company executives say they are pessimistic about reaching an agreement.

British Gas is holding out for a symmetrical system under which consumers could face price cuts or rises depending on how well TransCo performs from year to year. ...

But Ofgas officials said they were looking at a system "in which there is only upside for the consumer". Ms Clare Spottiswoode, the director-general of Ofgas, and her staff, are concerned that 19m gas consumers, who have been promised lower gas prices as a result of the planned introduction of full competition in 1998, could see their bills rise in order to cover revenue shortfalls that TransCo might expe-

"We recognise the problems of putting the price up to con-

But British Gas executives reject the Ofgas approach. "It is difficult to see the incentive if there is only upside for the consumer," said one senior executive, adding that he "would be surprised if there was agreement" on a profit sharing mechanism.

Ofgas officials, however, said British Gas's approach on the issue was not consistent. They reported conflicting views between TransCo'a management and executive directors at the group level. That was denied by a senior executive, who said: "There is no wedge between the PLC and TransCo' on profit sharing or any other issue in the price control formula.

The notion of profit sharing In utilities has been put for ward by Labour as a way to ensure that consumers benefit from any "excessive" gains made by regulated utilities. Mr John Battle, the Labour party's chief energy spokesman, yesterday said that the party was still studying the issue. "But a Labour government would want to see a fairer distribution of benefits and profits built into the regulatory sys-

tem," he said. British Gas executives said they have looked et a sliding scale system, under which both consumers and shareholders would have to share the effect equally from 5-10 per cent increases and decreases on a given profit measure.

#### BA to launch internal TV service

et present.

By Michael Skapinker **Aerospace Correspondent** 

since Ford paid £1.56bn for the

Mr Scheele said that one-

company in 1989.

British Airways plans to become the first company in the world to make daily televi-sion broadcasts to its staff. The broadcasts will include senior managers being "doorstepped" and interviews with staff involved in industrial disputes.

Mr Robert Ayling, chief executive, said yesterday that the 15-minute daily BA news broadcasts could begin in April. They will cost BA £2m-£3m (\$3.1m-\$4.6m) a year, and will go to all 53,000 staff worldwould require managers to account for their decisions. "It will expose those managers who are not performing; we probably have too many managers," he said.
The broadcasts, Mr Ayling

up of the XKS. Jaguar has

capacity to build up to 17,000

XK8s a year, but does not

Saleroom secret: the price of Jaguar's new XK8 has not yet been announced

third of ontput could be made expect the new model to lead

said, would give company news directly to all employees. an improvement on "the terrible rumour mill we have at the moment". Mr Ayling, whn succeeded

Sir Colin Marshall as chief executive this year, dislikes systems of company communications which require each level of the corporate hierarchy to transmit information to Mr Ayling said BA reporters more junior levels. "I want us

to be a modern company, a young company," Mr Ayling said. "I want to get rid of hierarchies and deference to

to any increase in its work-

force above the 6,600 employed

seniority He said the broadcasts would belp to provide employees with better information during industrial disputes, such as that last year when staff at Heathrow Airport objected to

the employment of students. He said BA was thinking of arranging for the broadcasts to be submitted to hotels which hosted crews, as well as to places of work. Staff staying in hotels would have to enter e code to see the broadcasts, but Mr Ayling added: "If 53,000 people are going to be seeing it, you have to assume it will be seen by people not in the

Mr Ayling said BA's improved first and business class cabins had helped it win back Japanese passengers lt bed lost to Virgin Atlantic, Japan-Airlines and All Nippon Airways. He said Japanese customers had gone to competing airlines because they did not think the BA product was good enough.

Meanwhile, BA said yester day that its passenger traffic increased by 13.4 per cent in February compared with the same month last year.



the UK's newest oil province west of the Shetland Islands The area ranked above Latin America and tha Middle East in terms of its overall attractiveness for investment. Most respondents thought there was still significant oil reserves to be found in UK waters.

But a majority thought the number of jobs in the industry will continue to decline for the remainder of the decade. A majority of respondents also thought there would be an increase in mergers and acquisitions in the UK's oil and gas sector this year. They also believe that the consolidation of the sector will accelerate in coming years. Robert Corzine, London

## Ulster loyalists warn on violence

and John Murray Brown

Leaders of Northern Ireland's loyalist fringe parties yesterday signalled their commitment to uphold the ceasefire until the start of all-party negotiations, but warned of the "serious difficulties" in preventing a return to violence. The leaders of the Ulster Democratic party and the Progressive Unionist party, which represent the paramilitary groups, did not rule ont a return to "full-scale conflict".

However, they argued that the paramilitaries deserved credit for their "incredible restraint" in the face of the resumption of IRA terrorist

The two parties also signalled a rift with the Ulster Unionists, the largest unionist party, over the format of elections in Northern Ireland.

The European Investment Bank is to provide a £24m (\$36.7m) interest rate subsidy to small and medium sized enterprises as part of the European Union's £266m peace and reconciliation package for Northern Ireland. The EIB has designated 13 UK and Irish banks to dispense the package, which was formally launched vesterday in Belfast by Ms Monika Wulf-Mathies. the EU commissioner for regional affairs.

Baroness Denton, the Northern Ireland economy minister in the British government, said the subsidy, if fully taken up, will promote

In the first sign of a thaw in relations between Dublin and the Ulster Unionists, Mr John Bruton, the Irish prime minister said Dublin would "reply positively" to an invitation received from Mr David Trimble, the Ulster Unionist party Amid signs of deepening dis-

trust between Dublin and Sinn

Fein Mr Bruton also confirmed

that the government intended

to hold a further meeting with

the IRA's political wing "at the earliest opportunity.

As the second day of intensive consultations got underway in Belfast, Mr Bruton also came under attack in the Irish parliament over reports that he had pressed Mr John Hume, leader of Northern Ireland's moderate nationalist Social Democratic and Labour party, Hume to support the British government in the vote on the Scott report last week.

business sector. The EIB, the European Union's development bank, has been involved a number of job creation schemes in Northern Ireland but this is the first time the bank has offered subsidy credit terms. The commission has so far approved projects

£240m worth of capital investment in the small

worth £5.5m, but £45m has been earmarked for non government bodies, and a further £37m for newly created partnerships between Northern Ireland's 26 local councils, and community and business groups.

Mr Bruton declined to confirm or deny the reports. Howaver Irish opposition politicians yesterday pressed the prime minister, anxious to exploit any differencea between Mr Bruton and his coalition partner Mr Dick Spring, leader of the Irish Labour party, which would look askance at any suggestion the coalition had planned to rescue a British Tory govern-

#### NOTICE TO THE WARRANTHOLDERS OF CREDIT SAISON CO., LTD.

Warrants (the "Warrants") to subscribe for shares of common stock of CREDIT SAISON CO., LTD. issued with U.S. \$150,000,000

4 1/2 per cent. Bonds due 1996 Pursuant to Clause 3(xiv) of the Instrument dated 25th April, 1991 (the "Instrument") and in accordance with Conditions 7 and 11 of the Terms and

Conditions of the Warrants, notice is hereby given that: Due to issuance by CREDIT SAISON CO., LTD. (the "Company") on 29th February, 1996 of U.S. \$200,000,000 2 1/4 per cent. Bonds due 29th February, 2000 with Warrants to subscribe for shares of common stock of the Company (the "Shares"), the First Unsecured 15,000 Million Yen 1/2 per cent. Convertible Bonds due 31st March, 2003 and the Second Unsecured 15,000 Million Yen 3/5 per cent. Convenible Bonds due 31st March, 2005, respectively, at a consideration receivable by the Company of Yen 2,409 which is less than the current market price per Share (Yen 2,436.30) on the date in Japan on which the Company fixed the consideration, the Subscription Price of the Warrants in effect was adjusted, effective as of 1st March, 1996, as follows pursuant to Clause 3(viii) of the Instrument and Condition 7 of the Terms and Conditions of the Warrants: Subscription Price before adjustment; Yen 2.212.5

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Dated: 6th March, 1996

By: Dai-Ichi Kangyo Trust Company of New York, as the Disbursement Agent

Yet whenever the state transportation authority, Massport, tries to discover exactly where the pollution is coming from, local businesses engage in old-fashiooed fin-ger-pointing. "Everyone blames everyone else for the problem," says Norman Faramelli, a director at Massport. "And there is no way to prove who is responsible."

A new technology developed just across the Charles River at the Massachusetts Institute of Technology (MIT). however, may soon make Faramelli's job a little easier. Three professors at the university - Adel Sarofim, William Peters and John Vander Sande - have come up with a way to trace small-particle pollution to lts source.

By imaging particles with elec-tron microscopes and conducting a complex analysis, say the professors, they can identify not only the generic origin of soot - such as car exhaust or factory pollution - but the specific source as well.

According to the MIT professors, every pollution source carries a unique "signature" – a "sootprint", as they have dubbed it.

"To start with, we can say if the particle comes from a diesel engine." says Vander Sande. "Then we identify other particles like the kind of lubricating oil used, which fuel it was operated on, and so forth. With a thorough analysis, we can even identify other conditions such as the time of day it was operated or if an aeroplane was taking off or landing.

After 10 years of research, Vander Sande and his colleagues say, they will be ready to conduct some large-scale testing later this year. If everything goes according to plan, many husinesses may be held fully accountable for their pollution for the first time.

One of the professors' first customers may be the government of Massachusetts, "This could be a valuable tool for us," says Sonia Hamel, director of air quality for the state. "We may request some testing ut the autumn, if I were a company putting out a lot of pollu-tion, this technology would make me nervous.

ldentifying pollution sources is vital for tackling air quality problems around the world. Yet until now, it has been a very inexact science, in Mexico City, for Instance, the murky haze that envelopes the city has been blamed on everything from steel plants and huses to residents using gas burners at home.

THE HOUSEWORK IS NEVER PINISHED WHEN YOU'VE GOT SMALL-PARTICLE POLLUTION EXPERT IN THE FAMILY



# 'Sootprint' clue to pollution

Detecting specific sources of harmful small particles may be about to get easier, writes Victoria Griffith

"In an ideal world, pollution would be controlled uniformly at the source," says Vander Sande. "But in reality, pollution is often targeted for control only once it is known to produce an undesirable effect. But if people are dying of cancer in a certain area, for instance, there has been no way to prove it is because they live down wind of a factory 15 miles away."

Mobile sources of pollution such as cars and aircraft present another challenge. Cars represent millions of tiny smokestacks: yet because they are so small and numerous, they are extremely difficult to con-trol. The new MIT technology would help environmentalists assess the exact impact of such

But it will not resolve all pollution analysis questions. For one thing, it identifies only soot - technically defined as small particles. Public focus is still mainly on gas pollution - elements such as ozone and carbon monoxide.

Yet soot has been gaining attention as a particularly harmful form of pollution. A recent series of studles at Harvard University's School of Public Health, for

FUTURES & OPTIONS

instance, link small-particle pollu-tion to severe health problems and

early death. Vander Sande knows first hand the bealth problems soot can cause. His analysis began 10 years ago in the hills of Pennsylvania, when he was asked to study small particles

It will take a long time for MIT technology to make any large impact on air quality control

in the lungs of miners.

The medical community was baffled by some miners' ability to survive decades in the mines without contracting black lung disease while others succumbed after just a few years. The answer, according to Vander Sande, was that the disease was caused not by the coal dust as was widely believed, but by the small particles released when the coal was extracted.

As some areas contained more harmful particles than others, the specific mines worked in were more important than the number of years

spent underground.

Because of health studies like ing increasing attention to small-particle pollution. Yet even as the focus shifts to soot, it will take a long time and a lot of investment for the MIT technology to make any

large impact on air quality control.
"We first need to take samples of pollution at a specific factory to be able to say that soot comes from that factory," says Vander Sande. "Without a basis for comparison. the technology would be meaning-less." And Vander Sande admits his operation is still so small that just one or two large scale studies would keep his equipment tied np for nearly a year.

Despite the problems of implementation, the MIT sootprint system is an important breakthrough for pollution control. For the first time, environmental managers could irrefutably link pollution to sources, even if they are many miles away. "Anything that belps us identify where the pollution is coming from is extremely useful," says Hamel. "This technology may help us do that."

Viewpoint · By Derek Osborn

## Action plan for everyone

Brussels is preparing new proposals following a period of both progress and deterioration



The European Union is gearing up for a new round of negotiations on lts environment strategy for the

rest of the decade. The European Commission recently published proposals for updating its last environment action plan, adapted in 1992, and Ritt Bjerregard, the environment commissioner, presented them to the Environment Council for a first preliminary discussion on

One of the important hack-ground documents to the revised plan is a report which the Commission asked the European Environ-ment Agency to produce last year. The agency's job is to monitor the state of the environment throughout Europe and trends in it. Last autumn's report shows a mixed picture - good progress on some issues hut deterioration on others. Overall, we are still some way from achieving a sustainable pat-tern of development in Europe.

The reduction and elimination of CFC (chlorofluorocarbon) production to protect the ozone layer is one of the great success stories of the environment in recent years. and shows what can be achieved hy scientists, policy makers and industry working together to solve

It is encouraging to see how the environmental necessity of eliminating CFCs is becoming the mother of all kinds of new CFCfree inventions, such as the hydrocarbon refrigerators launched last month by Elstar of the UK.

But the report shows that in other areas we are not yet doing so well. Carbon emissions may possi-bly be stabilised by Europe as a whole by 2000 as planned. But we are clearly only at the beginning of the efforts that will he required in Europe and throughout the world to deal with the climate change problem.

The energy supply sector has done the most so far to achieve

next stage from greater efficiency in the consumption of energy, above all in the transport sector. Everyone is looking for innovation from industry here - and for new proposals from the Commission for targets and measures to promote greater carbon efficiency in

Emissions of sulphur dioxide and the problem of acid rain have been much improved in the past few years as coal use has declined and techniques have been introduced to clean up emissions from power plants and other large combustion plants. Further progress over the next few years is clearly now in the pipeline.

The quality of air in our streets has, however, heen deteriorating because of the growth of road traffic and increasing emissions of nitrogen oxides and other pollutants; and although catalytic converters will bring some reduction of emissions from new vehicles, the growth of the number of vehicles is expected to cancel out much of the We shall need more new technol-

ogy here, and another round of ightening of standards to deal with these NOx emissions and the growing concern about poor air quality and its possible health effects. Again, the Commission's next set of proposals, following lengthy co-operative studies with the oil and motor industries, are eagerly awaited.

Meanwhile, strategies are beginning to he put in place to minimise or cut the production of waste throughout Europe, to promote recycling and to improve methods of final disposal of unrecoverable

There is still far too much waste being produced, and not yet enough recycling. Also, too much waste is being disposed of to unsa-tisfactory landfill or in old and outworn incineration plants. Major investment will be needed in waste reduction, recycling systems, recovery of energy from waste and improved landfill management over the next few years.

greater carbon and energy effi-ciency. More will be needed in the gramme following through from gramme following through from the Urban Waste Water Directive and other European water legislation. But there is more to be done to clean up ground water and other waters affected by diffuse sources of pollution, particularly those arising from agricultural practices. Further reforms of the Common Agricultural Policy could have a major influence here in encouraging less intensive forms of agriculture with lighter use of pesticides and fertilisers. There may need to be new efforts to deal with some of the damaging effects of persistent organic com-

> The Commission's new action plan is a bold and wide-ranging document which gives a strong lead on the way forward on all these issues.

It proposes more use of economic instruments to encourage good environmental practice; a new pattern of voluntary agreements with industries to achieve environmen-tal improvements; further mea-sures to promote more sustainable agriculture, and more environmentally-friendly transport; and measures to strengthen the implemen-tation and enforcement of

environmental legislation.

There is sure to he intensive debate on the plan during 1996 both in the Environment Council and in the European Parliament hefore it is agreed by the new Maastricht process of co-decision-

But the significance of the dehate goes way heyond tha environment professionals in Brussels and capitals. The plan and its implementation needs to involve those responsible for transport, agriculture, anergy and industry policies at European and national level just as much as environment policy specialists.

It also needs to involve industry and business, local government and non-governmmental organisa-tions just as much as national governments. The environment action plan is a plan for everyone's environment - and everyone needs to be involved. The agency will provide the facts to fuel the

Water quality is gradually Derek Osborn is chairman of the improving in most parts of Europe, European Environment Agency.

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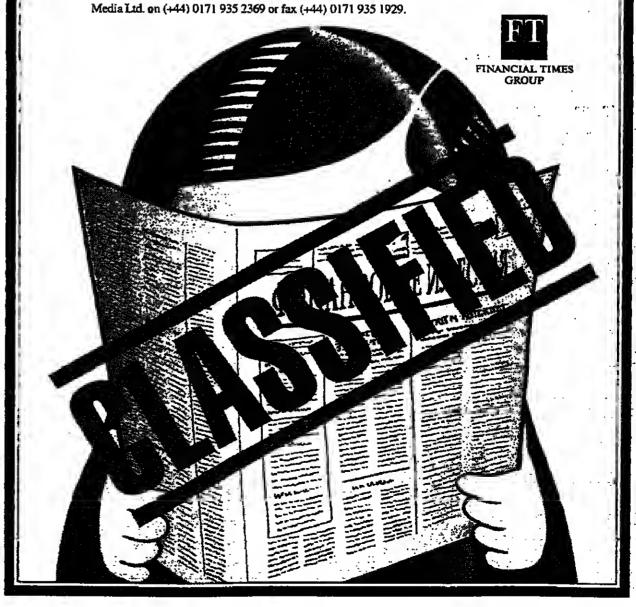
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Thus we see Carol putting on stockings and suspenders and strutting around while Curly hauls on his rubber gloves; and new girl Colette engrossed in conversation with Anita while casually continuing with the flagellation of a punter as he kneels in skirt and ear rings to clean ont her kitchen cup-boards. Heaven forbid we should get a glimpse of sexual intercourse – that might corrupt us! The first series, about -a murder, was pretty bleak and gritty. Episode 1 in the new series suggested that we may he in for something more soapy and banal as the women's cleaning company takes off and the supergirls outwit the beastly men.

Candid questions and comedy

Under the title The Long Johns, Channel 4 is running 10minute versions of the twohanders created by John Bird and John Fortune for Rory Bremner, Who Else. These aemi-improvised confrontations between a mild mannered interviewer and some ghastly authority figure (two-faced politician, grasping head of a privatised utility, and so on) have added tremendously to the Bremner series. So unedited versions seemed a marvellous idea. But in fact they bear out the old rule that tha more tightly you edit, the better comedy usually becomes. To ace the under-edited versions, complete with corpsing and hesitations, actually reduces the pleasure.

If there are any greybeards left in the comedy department of the Birtian BBC, perhaps one of them could bring this rule to the attention of Dawn French and Jennifer Saunders, From their earliest work together on screen they have tended

towards the self indulgent, hut there have been moments in the new series of French And Saunders, which finished on Thursday, that have been the

lt seems odd that performers

of such obvious intelligence

should have a blind spot when it comes to knowing wheo a joke has been worked to death and beyond. The worst example concerns the two provincial ladies, one of whom repeats everything the other has said, five seconds after she has said it, and while she is still talking. It was not funny the first time they did it, and to see it come up again suggests to the viewer that these performers are now beyond editorial control. Still, their Sloanes trying to run an art gallery and getting 12 separate sounds into every vowel are priceless. And Dawn French's lying schoolgirl - "So you went to that rave?"/ "Yeah, wore my Oasis tee-shirt and took E all the way through"/"Fuuny 1 thought 1 saw you that evening in your

gym slip with your dad in the high street" - has me flailing for breath on the old greeo

Television/Christopher Dunkley

ARTS

week, was that of the Chinese

lorry driver wbose vehicle fell

hundreds of feet down the side

of a remote wooded valley,

leaving him trapped in his cah

under a tree trunk, only to be

rescued by a whole team of

western doctors and engineers

who happened to be the next

people to pass along the road

and who recorded brief hits of

their rescue on camcorder. It

makes a change from all the

hatred and death on the news.

either a modification or a com-

Thomas Comedy Product on

Channel 4 comes as close as

possible to being really oew,

though even this reminds you

of Candid Camera and the Bea-

dle dreadfulness. The differ-

ou see few genuinely

new ideas on televi-

sion these days: any-

thing claiming to be

When ambulance-chasing series such as Blues And Twos first appeared on UK television they were condemned here as cynical attempts to exploit misfortune for the sake of ratings: "See the old lady trapped under the lorry!" Experience has shown, however, that not every programme in this category is contemptible. BBC1's two recent 999 International Rescue specials have been enthralling and inspiring. True, each did spring from people's misfortune, but it was their good fortune to which these programmes were inter-

First came the woman whose life was saved by an operation during a long-haul flight, carried out by a professor of surgery, a medical student, and an air stewardess, using a wire coat hanger, a pair of scissors (to go through the chest wall,

for crying out loud) and ence is that Mark Thomas's brandy for sterilisation. Then, stunts come with attitude, He amongst other stories last is a funny and fast-fire stand-up comedian, but the guts of these programmes are the filmed sketches. Two weeks ago he went in a

rabbit outfit to the offices of Live TV, the Daily Mirror cable TV company where they have News Bunny, claiming to be a stand-in sent by an agency. Last week he drove a tank around London trying to get government help in exporting it to Iraq, calling on the DTI and even William Waldegrave's He also interviewed a PR

woman from McDonald's who explained bow the hamburger experience should be fun. Then be tested to breaking point the new tends to be sense of fun of those running a drive-in McDonald's, ordering bination of old ideas. The Mork 50 burgers which be promptly tried to re-sell at cut price outside their front door, taking cows through the drive-in, and arriving with a jazz band on a low-loader. The trouble is that even if you begin by feeling he

has chosen legitimate targets, you usually end up sympathising with the small fry who invariably have to deal with

You could argue that Ruhy

Wax was using the technique before Thomas, but her targets are usually individuals rather than companies, government bodies, or ideas. The similarity lies in the way that Wax likes to form a conspiracy with the viewers against the target. whether it is Imelda Marcos or Pamela Anderson. The trouble is that, as with Thomas, the goading and sly asides to camera can eventually set you against the interviewer and drive you into a sort of sympa-thy, however unwilling, with the victim. But in the last episode of Ruby Wax Meets . . . the subject was Burt Reynolds who gave as good as he got, waiting till Rube was preoccupied and then leaning into camera to comment in a stage whisper on this pushy broad, and making sure, when she dived behind him to put on a Burt Reynolds tee-shirt, that we all got a good look at the hefty Wax frame. No doubt our heroine was in on all of this, but the sense of equals fencing was more enjoyable than that of a clever-clogs scoring points off a dimwit.

sprawled in his invalid chair,

Olle Persson sings in an exqui-

site mezza voce to the unseeing

maid, a cobust peasant girl

who strips and washes, exud-

ing bealth and youth from

amplified voice (Olle Skold,

sounding like Fafner). The

child-guardian darts forward to

cradle his head as be falls, and

then gently raises him, a young, handsome man again.

Giovanni looks wonderingly at

the others, touches his victims

(Elvira, Leporello) who

absently brush away this half-

felt presence, and wanders into

immortality. Despite the hell to

which he is consigned hy

words and music, this Gio-

iovanni's end is marked by writhing

agony at the invisi-

ble Commendatore's

every pore.

Concert Vienna Concentus Musicus

visit to London by the Vienna Concentus Musicus is always an event to look forward too, especially given that its guiding force, Nikolaus Harnoncourt, is more likely to be found conducting interoational symphony orchestras sncb as the Concertgebouw and the Chamber Orchestra of Europe these days and picking np numerous recording awards. So its visit to the Barbican Hall on Monday to kick off its International Chamber Orchestras series (which over the next three months prom ises concerts from the English Chamber Orchestra and Pinchas Zukerman, Moscow Solo ists and Yuri Bashmet, and Stockholm Chamber Orchestra and Esa-Pekka Salonen) was especially welcome, not least because it offered that increasing rarity, an all-Haydn programme.

The Concentus Musicos is the oldest of the hig-name period-instrument hands. founded over 40 years ago. Alice Harnoncourt continues to grace the front desk of the first violins and there is still something earnest and proselytising about its playing. Curreot fashions among period performance specialists may permit a degree of tonal flexi-hility and warmth, tainted perhaps by later 19th-century bahits, but, for all its efforts to keep np to date, ghostly flickers of the hair-shirt ansterity and maddening mannerisms found in the Concentus Musicns's early Bacb cantata recordings, for instance, still

ts account of Haydn's Symphony No.52 in C minor, the quintessectial Sturm und Drang work, was snperficially impressive and often thrilling; bows blt into strings, rbythms were spat out, and valveless borns wbooped with irrepressible if perilous delight. Bot as ao interpretation it was curiously bloodless, relying on broad effects of contrast to make its points, pompons rather than pnrposeful. Mncb detail was lost in a congested mass of sound which the dutiful application of all of Haydn's repeats did little to clarify. vanni illustrates the Christian | The arrival of Barbara Bouney from Il mondo della luna and L'infedelta delusa promised to shed a welcome beam of sunlight, bot even she seemed disorientated at first, as po-faced in manner as the players.

It was not until the second half of the concert that matters took an upward turn. During the Scena di Berenice a gennine seose of dialogue ensued, and Bonney and the orcbestra ofteo produced music making of a quite special and melting beauty. After this, a rumbustious account of the Symphony No.31 in D did much to save the day, with appropriately rustic playing from the four horns in the first movement, some eloquent solos from leader and principal cellist in the second, a well-pointed minnet and a nicely delineated variation finale. Not the most searching or joyous Haydn performance by any means (who, after all, can compare with Beecham?) but a distinct improvement.

**Antony Bye** 

#### Theatre/Sarah Hemming

## Contraband in Cornwall

et's get a few things straight first. There is no monarch in Nick Darke'a new play The King of Prussia, neither does it venture anywhere near Germanic territory. The Prussia of the title is Prussia Cove in Cornwall and the self-styled "king" of it is John Carter, the charismatic leader of an 18th-century smuggling

Darke's play, which is brought to the Donmar Warehouse's "Four Corners" season by Cornwall's Kneehigh Theatre, follows the exploits of Carter and his fellow "free traders" but is far from being just a hearty romp, a romantic nostalgia trip or a dry history play. Rather it seethes with life, wit and ideas.

The Carters are running a successful enterprise. George III is on the throne, revolutions are in the air and nervousness makes duties heavy. So free trade is brisk and Carter and his hrothers provide a vital service with their contraband

gin and hrandy.
But while Carter may break. the law of the land, he prides himself on never breaking the laws of nature. "I am an honest man," he protests, constantly, and his code is strict and rigocous: he never marks his goods up more than his customers can afford.

It is only when a wealthy couple from Bath, the Stackhouses, move into the area and the hored Mrs Stackhouse, ignored by her botanist husband, starts playing the smuggling game to her own rules, that things turn

This is a meaty play, with some wonderful running gags and tricks of staging. But like Cornwall's coves, it has many unexpected depths. The piece acts as a critique of capitalism, it also raises questions about the points where justice, conscience and the law part

These themes are woven into an enjoyable script that throbs with a sense of place. You feel the presence of the sea constantly. You also feel that these are people living on the edge, in every sense. They are closer to the continent than to the rest of England - they all know where Brest is, but they have never heard of Bath. And the idea that life depends on wit and energy is reflected in the staging: in Mike Shepherd's playful, vigorous production, the versatile cast leap from scene to scene, turning a simple wooden gantry into a clifftop, a ship, a drawing room, a guillotine.

arke gives shape to a Cornish identity that feels vital and real and has nothing to do with clay pipes and clotted cream. He has an rvident love for his native dialect and writes rich, earthy dialogue with which the fine cast are totally at home. Carl Grose and Bec Applebee as Eddie Carter and Bessie the landlady give riveting, utterly convincing performances, while Tristan Sturrock as John Carter is splendid: impetuous, wilv. proud.

The play's weak spot lies in the characterisation of the Stackhouses, which is fairly flimsy and monotone. But this is a rich and good-burnoured work that embarks on its task of navigating Cornish identity with admirable stealth and is full of wicked contemporary barbs. There is no mistaking the irony when, at the end, Eddie Carter gives up smuggling to take up fishing.

The King of Prussia runs to Saturday at the Donmar Warehouse, then tours; the "Fonr Corners" season continues with playa from Wales, Ireland and Scotland (0171-369 1732).



Charlie Barnecutt and Tristan Sturrock in 'The King of Prussia' by Nick Darke | the stage in a wheeled chair.

#### Opera in Stockholm/Martin Hoyle Don Giovanni Don Giovanni for the Yet he remains the compulsive age of Aids? A Don philanderer throughout, his ebbing life concentrated on the Giovanni with a specifically Christian ouly thing be can do. This Is brooght out in the unbearably bent? Both courses bristle with dangers, from sentimentality poignant staging of the sereto kitsch. Stockholm's Folkonade. His head thrown hack,

peran (People's Opera) triumphantly avoids all the trans in the most theatricaly riveting production of Mozart's drommo giocoso I have ever seen, Directed by Peter Stormare, with sets by John Conklin, it was premiered by Glimmerglass Opera, New York, last July.
A child in a nightgown wan-

ders on during the overture; through the gauze we see the characters of the drama slumped, seated, sprawled. The child tooches them into life. she puts on the cliché Mozart powdered wig and frock coat. and prowls watchfully through the action.

What might have been merely sentimental has a wonderfully practical side - in the Act 1 finale, for example, where the Don, surrounded by armed enemies, is usually miraculously free with one hound. Here Don Ottavio places a pistol at the seducer's head. The music ends to a black-out; a shot rings out; but the lights come back and Giovanni is missing to everyeone's bewilderment. The wise child Mozart comes forward drawing the magician's shutter-gesture across ber face to reassure us the Don will be back after the interval. When Ottavio draws the noose tight round Leporello's neck the child snaps its fingers and time stands still as the characters freeze - except for the servant who thankfully

makes his escape. Most controversial of all is Giovanni himself. This Don is half in love with easeful death from his first appearance lolling in post-coital exhaustion with a plainly possessive Douna Anna. He languidly kills the Commendatore with little effort: the old man drops his aword, aghast at something in Giovanni's face: his own and others' deaths perhaps. This Doo Juan can hardly walk: Leporello pushes him around

tenet of hating the sin and lov ing the sinner. After all, redemption is as much part of the conventional Christian picture as hell-fire. None of this would work without both acting and sing-ing of superb ensemble quality. Persson is a young baritone who will surely be heard abroad. Fredrik Zetterström's bright-voiced young Leporello, is a good sort driven to exasperation by his demanding master, Anna (Clara Bystrand) benefits from the production's intimate approach, not hurling out "Or sai chi l'onore" hut treating it as an emotional journal: Elvira (Christina Hog-

man) similarly dramatises "Mi

tradi", a half-smiling, half-

weeping comparison of past

happiness with present pain. Klas Hedlund is a superh vocal stylist in both Ottavio's arias. The extremely fine orchestra is conducted by Michael Bartosch. This wonderful production where not a note or a word is taken for granted, is double-cast and runs until May.

# INTERNATIONAL

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CONCERT Concertaebouw Tel:31-20-5730573 Radio Kamerorkest: with conductor Jos van Immerseel and the Groot Omroepkoor perform Gade's Symphony No. 3 and Haydn's Mass No. 3 (St Cecilia). Soloists Susan Gritton, Bernarda Fink, Ivan Sharpe and Eike Wilm Schulte; 3pm; Mar 9

#### BERLIN

Cartina Cartin Komische Oper Tel: 49-30-202600 DANCE Romeo and Juliet: a choreography by Tom Shilling to music by Prokofiev, performed by the Ballett Komische Oper; 7pm; Mar 9 **OPERA** Deutsche Oper Berlin Tel: 49-30-3438401 Die Zauberflöte: by Mozert. Conducted by Stefan Soltesz and

performed by the Deutsche Oper

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Seiffert, Kirsten Blank, Marcia

Bellamy and Clemens Bieber;

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**OPERA** Oper der Stadt Bonn Tel: 49-228-7281 La Rondine: by Puccini. Conducted by Eugene Kohn and performed by the Oper Bonn; 8pm; Mar 7

#### **■ CHICAGO**

THEATRE The Goodman Theatre Tel: 1-312-443-3822 Arcadia: by Tom Stoppard. Directed by Michael Maggio, starring Kristine Thatcher, Patrick Clear, Fleur Phillips and Steve Cell; Mon Mar 11: 7pm, Tue - Thur, Sun 7.30pm, Fri. Sat 8pm, Thur, Sat, Sun also 2pm; from Mar 11 to Apr 14

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CONCERT Musikhalle Hamburg Tel: 49-40-346920 Philharmonisches Staatsorchester: with conductor Gerd Albrecht, soprano Julia Faulkner and tenor Wolfgang Fassler perform works by R. Schumann and Zemlinsky; 11am; Mar 10, 11 (8pm)

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Salle du Métropole Tel: 41-21-3122707 Orchestre de Chambre de Lausanne: with conductor Jesus Lopez Cobos and violinist Julian Rachlin perform works by Schubert, Bruch and Schoenberg; 8.30pm; Mar 11, 12 (8pm)

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Royal Opera House - Covent Garden Tel: 44-171-2129234 Semele: by Handel. Conducted by Charles Mackernas and performed by The Royal Opera. Soloists Include Ruth Ann Swenson, Judith Howarth, Felicity Palmer and Michael Chance; 7pm; Mar 8

#### ■ LUXEMBOURG

**OPERA** Théatre Municipal Tel: 352-470895 Prince Igor: by Borodin. Conducted by Valery Gergiev and

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#### **MUNICH**

CONCERT Philharmonie im Gasteig Tel: 49-89-48098625 London Philharmonic Orchestra: with conductor Franz Welser-Möst perform Mozart's Symphony No. 34 in C, Brahms' Symphony No. 3 in F, and Dvorák's Symphony No. 7 in D minor, 11am; Mar 10

#### ■ NEW YORK

CONCERT Cernegie Hall Tel: 1-212-247-7800 Toronto Symphony Orchestra: with conductor Jukka-Pekka Saraste and violinist Frank Peter Zimmermann perform Beethoven's Violin Concerto in D major, Op. 61, and Sibelius' Symphony No. 6 and Symphony No.7; 8pm; Mar 9 OPERA New York State Theater

Tel: 1-212-875-5570 Der Rosenkavalier, by R. Strauss. Conducted by Alexander Sander and performed by the New York City Opera; 8pm; Mar 9

#### **■ PARIS**

CONCERT Théâtre des Champs-Elysées Tel: 33-1 49 52 50 50 Kyung-Wha Chung and Peter Frankl: tha violinist and planist perform sonatas by Schubert and R. Schumann; 11am; Mar 10 **OPERA** 

Comédie Française, saile Richelieu Tel: 33-1 40 15 00 15 Dom Juan: by Molière. Directed

by Simon Eine. The cast Inludes Alian Pralon, François Beaulieu, Dominique Constanza, Yves Gasc, Martine Chevalller and Catherine Sauvai; 8.30pm; Mar 7, 10, 11

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California Plaza of the Legion of Honor Tel: 1-415-863-3330 Picasso, the Sculptor: this exhibition of some 15 works celebrates the re-opening of the Legion of Honor: to Mar 10

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Konserthuset Tel: 46-8-7860200 Violinist Benjamin Schmid and cellist Tanja Tetzlaff; 7.30pm; Mar 11

#### **■ STRASBOURG**

DANCE Théâtre Municipal de Strasbourg -Opéra du Rhin Tel: 33-88 75 48 00 Nederlands Dans Theater 1: performs Jiri Kylián's choreographies No More Play, Petite Mort, Overgrown Path, Sweet Dreams and Sechs Tänze; 8pm; Mar 8, 9

#### **SYDNEY**

CONCERT Concert Hall Tel: 61-2-250-7111 Hesperion XX: with conductor Jordi Savali and soprano Montserrat Figueras perform works by Guerrero. Correa, Monteverdi, Scheidt, Cabezon and others; 8.15pm; Mar 7

Drama Theatre, Opera Theatre Playhouse Tel: 61-2-250-7127 A Midsummer Night'a Oream: by

Benjamin Britten. Conducted by Tom Woods and performed by The Australian Opera, Soloists include Gillian Sullivan, Elisa Wilson, Kirsti Harms, Christopher Josey, Davis Collins-White and Michael Raymond Martin. Part of the Sydney Festival '96: 7.30om: Mar 8

#### **THE HAGUE** CONCERT

AT&T Danstheate Tel: 31-70-3609931 The Gambler, by Prokofiev. Conducted by Valery Gergiev and performed by the Kirov Opera; 8pm; Mar 11, 12, 13

#### CONCERT Palau de la Música i Congressos

**■ VALENCIA** 

Tel: 34-6-3375020 Orquesta de Valencia: with conductor Manuel Galduf perform works by Beethoven and Stravinsky; 8.15pm; Mar 8

#### **VIENNA** CONCERT

Konzerthaus Tel: 43-1-7121211 Alexel Lubimov: the pianist performs works by J.S. Bach/ Czerny, Ustwolskaja and Debussy, 7.30pm; Mar 8 **OPERA** Wiener Staatsoper Tel:

43-1-514442960 Maria Stuarda: by Donizetti. Conducted by Jan Latham-König and performed by the Wiener Staatsoper. Soloists include Agnes Baltsa, Mara Zampieri, David Kuebler and Kurt Rydl; 7.30pm; Mar

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#### **COMMENT & ANALYSIS**



be essential if the Union was

These propositions were

the orthodox doctrine of Euro-

pean integration - that all EU

member states must partici-pate equally in all policies and

speeds: the programme for

economic and monetary union allows for some member states

to meet the economic condi-

tions for joining the single

currency before others. But it

was heresy to advocate an n la

Most member states, led by

carte - or pick-and-choose -

Germany, want far-reaching

reforms, to be agreed at the

inter-governmental conference

voting. But since the UK gov-

ernment has already made

clear that It will reject any

reform of such significance, there is a danger the confer-

As a result, there is now the

prospect of an extraordinary

reversal in EU orthodoxy. For it is almost certain that the

big idea in the coming conference will be "flexibility", or

multi-track integration.

ence will end in impasse.

including a wholesale increase in the number of decisions subject to majority

approach to integration.

in all institutions.

to be enlarged to the east, and

sity of its many members.

Ian Davidson

## Orthodox doctrine reversed

The big idea at the European Union's inter-governmental conference will be a proposal to move towards faster integration for an inner core of member states

It is now clear that Mr John It will be pressed, not by the British, but by a powerful coalition led by France and Major will be offered a large backhand victory in the intergovernmental conference on Germany. And it will not be the future of the European intended to promote some Union which begins in Turin kind of loosening of the Union; at the end of the month. He on the contrary, it will open may not like the victory when the door to the formation of it comes, but that is politics: an inner core of member there is no gratitude. states willing to move towards Mr Major set out his vision greater integration to circum-

of the European Union in a vent British obstructiveness. speech at the University of Leiden 18 months ago. He said In other words, what will be proposed is not just the wholehe wanted to see a more flexisale reduction, or even elimible Union, in which some nation, of national vetoes on member states would move detailed policies in the Union. ahead of the rest, to integrate more closely in certain areas. It will be the virtual removal of national vetoes on the The traditional idea of a unifuture general direction of

tary community was, he believed, out of date. A flexi-European integration.

Advance indications of a ble, multi-track Europe would push for a radical new kind of flexibility in the European Union have been building ever if it was to contain the diversince France and Germany included the idea in a joint paper published last December. This said: "The temporary denounced as a foul attack on difficulties of one of our partners to keep up with the forward movement ought not to be an obstacle to the Union's capacity for action They might approach a com-mon destination at different

"For this reason, we judge it desirable and possible to introduce into the [European Community) treaty a clause of a general nature which would permit states which have the will and the capacity to develop between themselves closer co-operation in the sin-gle institutional framework of the Union." (These last words mean that any new inner core would still be part of the Union.)

The Franco-German proposal only came into focus last week, when the principle of flexibility and the option of faster integration for ao advance guard of states were openly endorsed by the Commission in the paper it has prepared for the intergovernmental conference. It suddenly became clear that this is going to be the central issue at the conference.

The Commission is, in some sense, the moral guardian of the European Community treaty and the orthodoxy of European integration. So if the Commission endorses a radical departure from the ma of a unitary commu-

sons, one long-term, the other nity, we can be fairly sure that the idea must have wideshort-term. The long-term reason is that Mr Major is right: in a much spread support among member states; which means it

really may be on the cards. Last week France and Germany took this principle of flexibility a step further, with a joint proposal to introduce a system of "constructive abstention" into the development of a common foreign and security policy. Under this, no member state would be obliged to take part in a joint action against its will, but it could not prevent others from going ahead together.
The question is: why now? It

is easy to see that there could be total deadlock over the future development of the Union hetween the UK and its partners at the intergovernmental conference. If that happens, it is also easy to imagine that the others would look for ways to side-step the British obstacle. But why are France and Germany setting up this radical - some would say divisive - attack on the ideal of a unitary community, even before the conference?

There are, I think, two rea-

in Europe. That expectation is now, believe, widely discounted in other capitals. Mr Blair may or may not be more pro-European by instinct. But nothing he has said indicates he is prepared to endorse anything like the German agenda for a radical reform of the European Union in a more federalist direction.

enlarged Union, multi-track

integration will be unavoid-

The Commission is already

arguing that the Common

Agricultural Policy cannot

simply be extended to eastern

Europe, because it would

inflict damaging inflation on

those countries by forcing up

food prices. If countries in

eastern Europe are to join the

Union, they will not be in a

position to take part in all pol-

The short-term reason is Mr

Tony Blair, the leader of the

UK Labour party. There was a

time, not so long ago, when

Germans and others were

openly arguing that the inter-governmental conference should be deliberately

extended beyond the next Brit

ish general election, in the

expectation that a Labour

victory would bring a UK gov-

ernment more accommodating

icles immediately.

If so, the main result of dragging the conference out beyond the British election would be to relieve John Major of any incentive to negotiate. It would thus intensify the conflict between the UK and the rest; but without any sufficient prospect of a better deal later.

In which case, it makes sense to reverse the order of events, and start by offering the British what they most appear to want: the right not to take part.

There are two tragedies in life," said George Bernard Shaw. "One is not to get your heart's desire. The other is to

The Growing Business · Richard Gourlay

## Europe left standing on the starting blocks

American venture capitalists are quicker to invest in technology-based newcomers

The latest figures on US initial public offerings of spares in young companies demonstrate the impressive ability of American venture capitalists to nurture growing businesses. in 1995 more than \$8.1bn was raised in such offerings by companies that had received part of their private equity funding from institutional venture capital funds. This was double the previous year's figure, according to Ventureone, the California-based investment research group which

collates the figures. More than \$5.6bn of the 1995 total was raised by 163 companies backed as start-ups or as "traditional early-stage deals". Another \$2.5bn was raised by 40 companies in leveraged buyonts or development capital. One reason so much is invested in high-tech start-ups. companies they have backed are still immature. The average communications and

Vectoreone saggests, is that venture capitalists can sell to the public markets while the networking company, for instance, was making a \$3m net loss at flotation, bad sales of only \$13m, had raised \$19m of private equity before flotation and had 121 employees.

The average electronics and computer company was losing \$700,000, had sales of \$25m, had raised \$14m and had 146 employees. It had enjoyed venture capital backing for about

The Ventureone report also looks at the number of venture packed businesses that made their founders wealthy. Fourteen entrepreneurs held a personal stake at the time of flotation of \$50m, compared with eight the previous year. Most of these fortunes were made in technology stocks. But whereas communications and computer networking compa-

nies formed the largest segment of the initial public offering class in previous years, software companies dominated in 1995 and not just because of the Netscape flotation. The hottest area was client-server architecture, the networks that link PCs to a larger central computer. To underscore the scale of venture-backed success in 1995,

tha companies continued to climb after their first trading day. On average, shares of the that floated in 1995 rose by 53 per cent, compared with 30 per cent for the companies floating in the previous year. Venture capitalists in Europe

will view these figures with considerable envy. They say they would back more young technology-based businesses if they could float the companies they backed earlier. But it can companies on European markets.

In the UK, for example, relatively few start-up companies have floated in the past five years. Most of those that have floated were biotechnology companies such as British to the main market under a modification to the rules requiring a three-year trading record. More recently London's Alternative Investment Market has shown some signs of being a market for young companies but has still to -prove it can raise large amounts of

Mr Rolf Selvig, marketing director of Ventureone, says the lack of public markets for young high-tech companies is Europe's Achilles' heel as regards the continent's ability to create wealth. "In the UK there is no exit

for investors in the venture capital-backed companies so the motivation to make investments is being removed right up front because the investors can't get back out," says Mr

Like other US observers of European stock markets, he save exchange officials are too against business risk. They should instead focus on ensuring companies come to the market with accurate listing particulars and leave investors to make their own decisions about business risk.

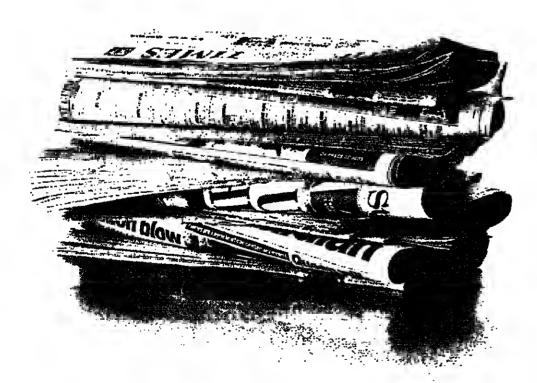
when they came to market in 1995.

The snape of or	-,					
	Communications/ networking	Electronics/ computers	Healthcare services	Medical compounds	Retailing/ consumer	information
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Based on 163 venture backed	startup compenies w	hich completed	Boletions in 199	6 Test full fleci	year Sou	rce: Yeinweone

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European viewpoint: John Major set out his vision 18 months ago



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## ·LETTERS TO THE EDITOR-

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### A choice that would destroy individual liberty

From Mr Stephane Aderca. Sir. Edward Mortimer bemoans the loss of collective choice in favour of individual choice ("Surfeit of good things". February 28). But the collective "choice" he advocates is nothing more than the destruction of individual liberty. Could anyone claim that freedom of religion still existed if it were decided that a vote were to be taken as to which religion "we" shall adopt, and the result is binding on all? Of course not. Having one vote in millions as to which religion to

adopt is not the same thing as to be able to choose one's religion. Democracy and liberty are not equivalent. Democracy is about the source of government power, liberty about its extent. If a democratic government uses coercion without restraint, citizens are no more free than under a dictatorship.

Mr Mortimer is correct in his assertion that "if every choice is left to the market, the right to vote becomes meaningless, because the people you elect have no power to change anything". But this is the way

things should be in a free society. Liberty means that coercion should be used only to prevent coercion and dishonesty. The power of politicians to change things is based on the power to coerce. In a liberal democracy, this coercion should not exist. There is no liberty in a

democracy when every citizen knows that the result of the next election could mean coercion imposed by fellow citizens. In fact, one could say that the hallmark of a liberal, versus a totalitarian. democracy is that the result of

elections don't matter. This is the best guarantee that freedom can never be threatened by any election. The loss of collective

"choice" or "freedom" is not a great loss. There is no such thing as group "liberty", which is nothing but the freedom of the group to oppress individuals. Only individual liberty is meaningful.

Stephane Aderca, 4a Norwood Villas Waterworks Road, Birmingham B16 9DE, UK

#### Downside of utility mergers

From Mr Christopher J. Clarke. Sir, David Lascelles' article "Power groups in overseas charge" (March 5) highlights why utilities are active in overseas mergers and acquisitions as growth dries up in the developed world and the industry restructures on global lines. It might be worth dwelling on the dangers by

way of balance. Academic research shows very small or negative returns to acquirers' shareholders against 25 per cent to 30 per cent returns to vendors' shareholders. Is there a compelling reason why newly liberated and fledgling utility managements should beat the

experts on these averages? Deploying core competencies across geographic or cultural boundaries is notoriously difficult. Cross-border M&A

is, therefore, even more hazardous. Arguably, investors can invest in growth utilities overseas directly. Why should they pay novice diversifiers to do so for them? Many leading investment institutions we have spoken to are rather keen that utilities remain low-risk, steady return investments in

their home markets. We are not arguing against M&A in the power industry. It has an important role to play in global restructuring. We are arguing for great cantion and careful analysis and planning!

Christopher J. Clarke, vice-president - utilities, A.T. Kearney, visiting professor, Henley Management College, Lansdowne House, Berkeley Square, London W1X 5DH, UK

#### **Best for London Stock Exchange**

From Mr Steve Hull. Sir, I would like to set the record straight on a number of comments concerning the London Stock Exchange in George Graham's feature 'Blood on the road to the

promised land" (March 5).

The first is that the Stock

Exchange Tower, which is the main freehold asset of the exchange, is not half empty, as suggested. It has three substantial tenants, and in December 1995 heads of agreement were reached with the London International Financial Futures and Options Exchange, which means that when it begins occupying more than 75,000 sq ft of space in the middle of this year, there will be no vacant space. In line with our husiness

plan, and against a projection of future space management

needs, I have been managing an aggressive policy which will ensure that we generate income from any exchange property likely to become surplus to our needs.

Wherever possible, leases have been surrendered or disposed of on sound terms. Where this has not been possible, we have successfully sub-let all of our surplus property. In planning for the exchange's future, we have considered all options available to us and, given that we own the tower, together with the cost of moving, I believe our strategy is both the cheapest

Steve Hull, head of personnel & property. London Stock Exchang London EC2N 1HP,

### Schemes for reducing unemployment not comparable

From Mr Gerald Holtham. Sir. The cost of job creation is relatively modest, as Mr John Edmonds said (Letters, February 29), because the cost of keeping people on the dole in the UK is so high. Moreover, it is possible to devise schemes which reduce the NAIRU (the rate of unemployment at which inflation accelerates) and are therefore not inflationary.

Mr Edmonds mentioned an Institute of Public Policy Research scheme to create half a million jobs for less than £2bn a year. Your readers may have the impression that it is a

modest version of another plan, by the Full Employment Forum, also mentioned by Mr Edmonds, which sought to create a million full-time jobs at a cost of 1.5 per cent of gross domestic product. However, the schemes are not comparable since the Full Employment Forum plan entails expansion of aggregate

demand and depends on the economy being able to sustain such an expansion without inflation going out of control Depending on where the economic cycle, it may sometimes be

appropriate and sometimes

The IPPR scheme is explicitly presented as additional to anything that can be achieved for unemployment hy the appropriate setting of monetary) policies. It is aimed at the long-term unemployed, people who would mainly not benefit from a general boost to demand before it triggered rising inflation.

For what it is worth, I would guess that demand policies could reduce unemployment by some half-million. The IPPR

scheme on top could give a total reduction of about 1m. A further reduction would require radical changes to the tax and benefit systems and perhaps to the wage system. I fear that an attempt to reduce unemployment durably by 1m or more purely through demand reflation would be inflationary.

Gerald Holtham. Institute for Public Policy Research. 30-32 Southampton Street, London WC2E 7RA, UK

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# FINANCIAL TIMES

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Number One Southwark Bridge, London SE1 9HL Tel: +44 171-873 3000 Telex: 922186 Fax: +44 171-407 5700 Wednesday March 6 1996

## Turmoil over Tokyo rescue

The long-suffering Japanese promises reforms once the funds public is making its voice heard in the row over plans to bale out financial institutions with Y685bn (\$6.5hn) of taxpayers' money. Popular anger at the scheme to rescue companies that over-extended themselves in property is so great that the government may find it impossible to push the proposals through parliament. That need be no disaster. On the contrary, political leaders should regard the impasse as an opportunity to push through radical reforms.

Until now, the powerful finance ministry has made all the running in handling the aftermath of the property boom. Naturally, it has strived to protect its own interests and those of the financial institutions in its charge. To achieve its ends, the ministry has tried to bully politicians - and the public - into accepting its view that

finance is so complicated that it should be left to experts. Unfortunately for the bureaucrats, its claim to expertise has been undermined by the property boom and bust, which also exposed widespread incompetence and crime in financial markets. In the past, the Japanese were will-ing to trust the ministry. But the public has now rebelled against the suggestion that their money should be used to refinance what

has proved to be a rotten system. The ministry argues that, withont the rescue, tha country's financial institutions could be swept into mass insolvency, but are in place. Japanese taxpayers have decided to call this bluff. By opposing the rescue, they are indicating their willingness to risk a run on the banks. They have decided it is better to see what happens if the housing loan companies collapse than believe the ministry's warnings.

The politicians should follow the public's lead. The half-baked rescue plan for the housing loan companies should be scrapped. If they fail, there may or may not be a run on banks, as the ministry has warned. If there were, there would still be time for a rescue, but taxpayers would then be in a better position to judge whether public money should be used.

So Mr Ryutaro Hashimoto, the prime minister, should change his mind. The jusen are not the only institutions in trouble over property loans. A botched rescne would set a dangerous precedent.

Above all, politicians should insist that the price of any rescues must be radical reform of the financial system. Hitherto, the bureaucrats' response to the crisis has been a series of ad hoc adjustments to the regime. But it is painfully clear that a regime which has vested so much discre-tionary power in the hands of one ministry has failed. If there are to be bale outs, there must simultaneously be an overhaul of the financial system to make it more open, more transparent and more

## Cautious steps

The suggestions for upgrading the European Union's external policy that were laid out in Paris yester-day by Mr Malcolm Rifkind are very British: limited, practical and intended as a counter-weight to more ambitious ideas, They are

welcome as far as they go. The foreign secretary moved closer to Britain's EU partners, notably France, by endorsing the idea of a "Mr Europe" who would personify the union. He has also aven ·a· qualified · welco: Franco-German proposal for a system of "constructive abstention" that would allow countries to avold backing a foreign policy initiative without blocking it either.

But even in these areas, Mr Rifkind is proceeding cautiously. He is careful to state that the new Mr Europe would be answerable to EU member governments, not the Commission. He sees the principle of "constructive abstention" as a complement to the right of veto, not a substitute. And unlike the French, he is adamant that countries cannot be expected to provide money for initiatives from which they have abstained.

Mr Rifkind'a other ideas - better planning, faster reflexes and more frequent meetings between senior diplomats - are too sensible and innocuous for anyone to raise much objection. They have also been carefully formulated so as to avoid any danger that EU's for-eign policymaking machine could escape the member states' control. However cautious its proposals. the UK government's plunge into the EU foreign policy debate is long overdue. Equally welcome is the effort to maximise agreement with France. Any external policy with teeth must begin with consensus between the two EU members with the widest global reach and the ability to project military force overseas.

His caution, moreover, is understandable. Mr Rifkind is right to say that institutional tinkering is no substitute for a genuine will to act. In areas where the sovereign changes will conceal those differ-

Indeed, he might have been quoting from Mr Richard Holbrooke, the caustic US observer when he observed that the EU lacked the "coherent world vision" which underpinned the policies of sovereign nations:

But he is too complacent when he calls this situation a fact of life which is not to the EU's discredit Whatever institutions they adopt tha moment when European nations have no choice but to co-operate more closely could come more quickly than most realise. The isolationist mood in the US means that Europe could well be left on its own to cope with the

next regional crisis. Mr Rifkind is right to say that neither institutions nor procedures will solve this sort of prob lem. But Europe's squabbling over institutions is only a symptom of a deeper reluctance to accept the need for collective action. Once that need is acknowledged, the institutional questions may solve

at Buchanan may fade from the political scene in the run-up to November's presidential election. But his campaign is fuelled by anger over the falling living standards of many Americans

which is unlikely to subside. Wage disparities have been widening and real wages sliding since the late 1970s. Although the Clinton administration has restored job growth and shrunk the daficit, and median wages have stopped falling behind, the long-term challenge of restoring wage growth remains. But while Mr Buchanan has iden-

tified the right issue, his solutions are irresponsible and dangerous. The fault does not lie with immigrants, the World Trade Organisation, the North American Free Trade Agreement, welfare mothers, affirmative action, venal corpora-tions or rapacious chief executives. It lies in two buge changes in the

way the economy is organised.

The first is the enormous pressure the old mass-production system that used to provide good middle-class jobs has come under from new information technologies and global trade and investment. This has caused the economic earth to crack open, leaving tens of mil-lions of Americans trapped on the wrong side of a great divide.

Contrary to the views of some neo-Luddites, the result is not fewer jobs. There are many new ones, but the good ones lie on the other side of the divide. They require technical or problem-solving skills and the capacity to acquire new skills con-tinuously. Machinists are being supplanted by operators of computer-controlled machine tools; garage mechanics, by automotive technicians who can diagnose and repair the electronic gadgets which control today's cars; clerks by office technicians skilled in using computers for

storing and undating data.

In every advanced economy. demand is rapidly shifting in favour of people with soch skills and against people without them. The earnings of the former are rising: the earnings of the latter are dropping (or, as in much of western

Europe, they are unemployed).

Those who remain trapped in the old economy either do not know what skills are needed, or cannot afford the costs of getting them, or feel too old to learn, or cannot easily uproot and move to where good new jobs can be found. As a result, most Americans who lose their jobs and find new ones never return to previous levels of earnings

The second big change is that the implicit social compact which used to bind corporations with their workers has come undone. Thirty years ago, a company that earned bealthy profits could offer its employees secure jobs with rising wages and benefits - and their communities could count on a steady tax base.

If the economy turned sour. employees might be laid off for a time. But when the economy revived, the work would return. The very term "lay-off" suggested a tem-porary separation. Unions played an important role in enforcing this compact, but it was enforced primarily by public expectations - an unspoken but widely-accepted norm that when a company did well, its employees and community would also do well. For a business not to share the benefits of its success would have been unseemly.

Those days are over because of intensifying competition for investment. Deregulation has forced airlines, telephone companies, utilities, distribution networks and



The private sector must take a greater role in helping Americans to

move from the old economy to the new, says Robert Reich

# A hand across the great divide

financial markets to mind the bottom line. Information technology bas shrunk transaction times between suppliers and customers. Easy access to capital markets has allowed small companies to grab market share from big ones.

**COMMENT & ANALYSIS** 

Add the convenience with which vast amounts of capital can now be moved at the push of a key on a personal computer and the result is 'electronic capitalism" - a worldwide system for immediately redeploying financial assets where they

can earn their highest return. Gone forever is the gentlemanly investment system that once allowed chief executives to balance the interests of shareholdera against those of employees and communities. Now, chief executives who don't abandon their employees and communities when the bottom line requires it risk trouble - while those who do are able to pocket multi-million dollar bonuses and stock options. Even the term "layoff" no longer means what it used to. Most lay-offs are now perma-

nent. A new word is needed to

describe this phenomenon - perhaps "cast-offs", rather than layoffs. This change in the implicit social contract makes it harder to deal with the more competitive business environment. The modern corporation's sole focus on maximising shareholder returns makes it less able to ease the workforce's transition to the new economy.

Nations as a whole are better off

when employers teach their workers basic or industry-wide skills beyond what is required to function effectively in their current job. National economies as a whole are more flexible and productive when employers ensure workers who are no longer needed get trained for and placed in new jobs. Yet, because shareholders don't reap the full benefits of such investments. even the most enlightened chief executive is loathe to make them to the extent that society needs.

What may be rational for each individual corporation is irrational for society. Almost three-quarters of national output comes from people; only a quarter from machinery. The quality of a nation's labour force is the engine of economic growth; physical capital is the caboose. If a significant portion of the workforce lacks the skills to suc-

ceed in the new economy, everyone's standard of living is imperilled. Widening inequalities and insecuritles also contribote to crime, delinquency and threats to public bealth.

Can government fill the breach? Only partly. While government can help people get job skills and offer support when unemployed, massive accumulations of public debt over the last 15 years require austerity. As President Clinton noted in his State of the Union address, "the era of big government is over".

To be sure, government can make more effective uses of its resources. For example, the administration bas taken steps to change the unemployment insurance system designed to provide income support during temporary lay-offs - into a re-employment system designed to move people rapidly into new jobs. The President wants to consolidate

federal job-training programmes into vouchers which unemployed or low-wage workers can use at community colleges or technical schools to obtain skills. He has also proposed significant tax deductions to

offset family expenses for univer-sity education or job training. But the public sector cannot pos-sibly do the job alone. The private sector must take more responsibillty for belping Americans across the great divide from the old econ-omy to the new. Business will need incentives to do things which do not necessarily improve sharebolder returns but benefit society as a wbole.

One possibility (this is far from a formal legislative proposal) would be to reduce or eliminate corporate income taxes for companies that achieve certain minimum requirements - for example upgrading the general skills of employees, sharing more of the profits with them and, when laying them off, retraining and placing them in new jobs.

This is a modest measure. Charitable enterprises are already spared paying income taxes; partnerships and proprietorships also receive favourable tax treatment. These differences reflect judgments about the social benefits and responsibilities stemming from these different

ut the same logic can be applied to business: there are social advantages in improving the quality and flexibility of the workforce, and societal costs in failing to do so. Certain enterprises may be well-positioned to maximise these advantages and minimise these costs - better posi-tioned than others, and surely better positioned than government. Society should encourage them to do so, and reward them accordingly.

Those who worship at the altar of the free market need not fear blasphemy. Corporations would not be required to keep on workers who do not contribute to the bottom line. nor to remain in communities if there are more efficient places to produce. It would be a simple quid pro quo: lower - or no - corporate income tax for accepting more responsibility for the social costs and benefits of economic change.

Where to make up the lost revenues? One possible source would be ending the myriad special subsidies and tax breaks targeted to particular companies, which provide no appreciable public benefits. Such corporate welfare totals over \$100bn a year in the US, according to the estimates of think-tanks across the political spectrum.

Others will have different ideas for how corporations can best respond to the growing inequalities and insecurities axperienced by working people trapped in the old economy. But discussion about the proper role of the corporation at this unique moment in history is no less important than the current discussion on the role of government.

When so many are foundering in the face of record profits and a soaring stock market, the failure of the private sector to respond imperils continued prosperity and stability. If too many people feel excluded from the gains of a growing economy and disproportionately burdened by its risks and costs, they will eventually support pobcies that sacrifice growth in favour of economic security - such as trade pro-tection, capital controls and inflexible employment rules.

The author is US secretary for labor in the Clinton administration

## Company deaths

If someone dies and a company is to blame, there is probably littla that relatives or friends can do about it. Almost all attempts to hold companies responsible under present law fail. According to a sensible set of proposals from the Law Commission, published yesterday, that could change.

The commission, the government's law reform organisation, recommends creating a new offence of "corporate killing". applicable where gross carelessness by a company results in deaths. The commission wants companies convicted of the charge to be liable to an unlimited fine, and also to be ordered to remedy the cause of death. In some cases, it is suggested, fines could run into millions of pounds.

The change would not represent any weakening of present law, as it would still be possible to pursue individual directors under existing manslaughter law where that

appeared applicable. The proposals, which are likely to have considerable popular support, recognise the steady level of public concern and frustration over the present difficulty of holding companies responsible. In many disasters in the past decade. companies have been deemed to be seriously at fault, but prosecu-tions failed. Such cases included the 1987 Herald of Free Enterprise cansize when 187 people died; the 1988 Piper - Alpha oil platform explosion, when 167 died; and tha 1988 Clapham rail

crash, in which 35 peopla died A record of failed prosecutions is not in itself a reason for changing law. However, the proposal rightly recognise the ahortcomings of existing law on corporate manslaughter, which requires prosecutions to identify a single person as the company's "controlling mind". There are many cases where sole responsibility is not discernible, but where many would still feel that the company as a whole was responsible.

The recommendations are welcome partly because they reflect those realities of corporate organisation, particularly in large companies. They are also valuable because, if implemented, they might well have more influence on directors' actions than does pres ent legislation. Executives would think carefully about behaviour which could easily incur an unlimited fine, where they - rightly regard the threat of going to jail

under present laws as remote. The commission was right, how ever, to stop short of recommending that individual directors should be jailed for tha carelessness of the company as a whole. In practice, that provision could have undermined the new proposals, by complicating prosecutions with exactly the questions of individual responsibility which the proposals seek to avoid.

Ministers must now decida whether to put forward legislation on the commission's recommendations. They should do so.

## OBSERVER David takes

## on Goliath

An unseemly spat has broken out between Morgan Stanley, the bine chip US investment bank, and David Roche, who used to be its hotshot European research chief. Roche, who now runs his ewn research outfit, Independent Strategy, is upset because his old employer has had the tenerity to question his views on China's friture' . .

The dispute has its roots in an article Roche wrote for the Wall Street Journal early last month. Roche takes a more bearish view of China's long-term prospects than Morgan Stanley. Nothing too ... astonishing in that, as his old employer has high hopes for China; it helped set up China's first international tovestment bank and is keen to win lots of business. Roche's real gripe is that Morgan

Stanley Asia responded to his . article by sending a fax to clients saying that Roche's argument is "really quite misleading" because it exaggerates the level of ... methorency in state owned enterprises. Roche has responded with a letter to his clients, saying that the Morgan Stanley fax is wait for it - highly misleading "It seems to us unusual (if not unprecedented) for a major global investment bank to start a debate

in such a personalised way.

thunders Reche. "We have known

Ber Brand Barter Berger

(at first hand!) the pressures of producing objective research within an integrated investment For those missing the point, Independent Strategy stresses that it's "neither restricted by any vested interests nor influenced by the pressures of national governments". One can almost ear the roar from the world's

#### His master's voice

for David Roche....

financial markets - thank heavens

Open him up, and the UK prime minister John Major will probably have Seoul engraved upon his heart. In Seoul on the last day of its Far East tour, Major's entourage was heartened to read an editorial in one of the local English language dallies, the Korea Herald.

The Korean scribe began calmly enough, describing Major's jaunt es a "fitting and propitious : occasion to further the cordial and productive relations" between the UK and South Korea, A few lines on, and frenzy erupted: "The fortifude and dynamism of the Conservative host of No 10 Downing Street has been wellborne out by the record of his many years at the helm of the United Kingdom.".

"More, more," the British . delegation was heard to cry over breakfast. They got it. The back continued: "He led the country

effectively in the face of diverse challenges from his critics at home and opponents abroad. The current political and economic stability of tha proud nation goes to the credit of his strong leadership." This was their finest hour.

Thirty-somethings ■ All change at the Group of Thirty. Paul Volcker's favourite think tank: John Walsh has replaced Charles Taylor in the executive director's seat.

The Washington DC-based Group of Thirty is the slimmest of organisations, but punches well shove its weight. Under a heavyweight board beaded by the former Federal Reserve chairman. it has pitched in on some of the most ponderous issues facing international bankers and finance officials.

The Group's collection of essays on the World Bank and International Monetary Fund became the essential handbook for officials considering the future of the twin Bretton Woods institutions on their 50th anniversary; its study of derivatives law and practice established a virtual industry standard for managing derivatives risk.

-Taylor is now going to put that work to good use for consultant Arthur Andersen, Walsh, Taylor's deputy at the group, joined it from Capitol Hill, where he handled

international banking issues at the Senate banking committee for Republican Jake Garn. He takes control at a delicate time; The Group is working on ways of bandling international bankruptcies, such as last year's Barings collapse.

#### Magnetic Pole

The temptations of fuse-mending and electrical rewiring have oddly proved less than overwhelming for Lech Walesa, Poland's former president. Instead of returning to his former employ as a shipyard electrician in Gdansk - as he appounced he would in January - Walesa is following the well-beaten path created by many former. international statesmen and women, by setting off on the global lecture trail.

First stop is Scandinavia, where he will lecture a gathering of stock exchange types. Then in April he's off to the US. His lecture title is; "Changes in Europe, the past, the present, the future - through Lech Walesa's eyes". Proceeds will go to the Lech Walesa Institute, set up after last November's presidential elections. The cash-strapped institute aims at uniting Poland's disparate opposition to the ruling coalition of former communists

and peasant farmers. And the shipyard plans? Short-circuited, for the time being, at least.

## Financial Times

#### 100 years ago The Italian crisis

Rome: The Chamber was full to overflowing this afternoon, more than 400 deputies being present: Signor Crispi, who was surrounded by all the members of the Government, immediately rose and announced that the Cabinet had given in their resignations to the King, who had accepted them. At these words the whole House sprang to its feet and cheered loudly for fully five minutes. When at last something like silence was obtained, Signore Crispi continued: "But His Majesty has requested us to continue in office for the despatch of current affairs." Loud groans ensued, and when the uproar had somewhat lessened, Signor Crispi, waving his arms towards the Extreme Left, shouted, "Yes, and keep order, too." With a wild yell the members referred to sprang to their feet and hissed

#### and booted vigorously. 50 years ago

New York listings I imagine that not many British public companies will be anxious to have their shares listed on the New York market is the same experience awaits them as befell Roan Antelope Copper Mines. The company was required to supply about 20 closely filled pages of information which took two months to compile in New York - Lex.

## FINANCIAL TIMES

Wednesday March 6 1996



Decision to upgrade Tornados aids Eurofighter

## UK scraps plan to lease F-16 fighters from US

By Bernard Gray in London

The UK Ministry of Defence has F-16 fighters and will upgrade its existing Tornado fighters to fill a gap until the Eurofighter comes into service.

its decision consolidates the position of Eurofighter, the next-generation jet heing developed by Britain, Italy, Germany and Spain, by removing the threat that the UK could move to a US

However, it is a blow to Mr David Hart, an adviser to Mr Michael Portillo, the UK defence secretary. Mr Portillo has been strongly challenged in the House of Commons about Mr Hart's role at the MoD in general and on his advice on the F-16 in particular.

An MoD competition between upgrading 100 Tornados and leasing 30 F-16s concluded that stick-

would be far cheaper. Much of the extra cost of F-16s would have come from the additional support equipment which would have been required. Ae

Fifa tackled

over royalties

on footballs

Continued from Page 1

the European Union.

Switzerland is oot a member of

Fifa said yesterday it could not

comment because it had not been

informed officially of the Com-

missing's toyestigation. However, it pointed out that only balls psed in international

matches bad to carry the new

Fifa logo. It also said money from the scheme was be used to fund its youth football initiative. Brussels says the cost of the

royalty system, which was intro-duced at the beginning of this

year, edds around SFr8 to the

cost of producing and retailing

each hall once the necessary

tests required for use of the Fifa

ever, are against the scheme.

Adidas welcomed the licensing

programme and said the price of

its foothalls had not risen since

The Commission's investiga-

tion could result in hefty fines if

it finds that Fifa has abused its

position as an exclusive certifler

of high quality footballs.

logo have been completed. Not all manufacturers, how-

its introduction.

ing with the existing fighter

air-to-air refuelling tankers. training equipment and maintainance facilities. During the competition the proposed upgrades to the Tornado were also slimmed down to the minimum to cut costs.

Now British Aerospace will be given a \$125m (\$192.5m) contract to fit improved electronics to the F3 Tornado fighters which will allow theo to carry the latest short and medium range mis-siles. However, the MoD will not buy additional missiles, and the Royal Air Force will have to use existing air force and Royal Navy

BAe is already developing large numbers of the new Asraam short-range missile for the RAF, which will be available by the time the first Tornados are upgraded in 1998. However, the Navy, which is the only current user of the Hughes Amraam medium-range missile, only carries a stock of 100 for its F/A-2

Since the UK would only have 100 missiles to arm up to 100 Tornados and 30 Sea Harriers, it

would be reliant on the US being prepared to supply more Amraam missiles in any conflict, which could he fitted to the Tornados

very quickly. The need for action came hecause the fighter version of the Tornado was increasingly falling behind modern aircraft being used elsewhere, and the introduc-tioo of the Eurofighter had been delayed several times. The RAF had become uncompetitive, and the UK was embarrassed at its reliance on US air defence cover in the Gulf War and Bosnia.

The Tornado P3, which is fast and has a long range, will oow gain the agility it lacks through fitting the highly manoeuvrable

The RAF had strongly backed upgrading the Tornado as e lowcost way to fill the gap, partly because it was concerned about the threat posed to the Eurofighter programme by a "Trojan Horse" of US fighters being used by the UK. "Once you put in the frastructure for one squadron of US jets, it is the easiest thing in the world to buy more," said

## EU states ordered to pay for breaches of European law

end Deborah Hargreaves

European Union states must compensate individuals and com-panies for losses resulting from government failure to implement EU laws correctly, the European Court of Justice ruled yesterday.

The ruling means the UK government must pay damages to Spanish fishermen banned from British waters in 1989 and Germany must compensate a French hrewery prevented from exporting beer to Germany.
Ninety-seven Spanish and

Dutch fishermen are suing the UK government for up to £30m (\$16.2m) after it legislated in 1988 to close a loophole which allowed foreign trawler owners to circumvent EU fishing quotas by registering their boats under the British flag. In 1991 the act was withdrawn after the Luxembourg court ruled it incompatible with European discrimination laws.

In the German beer case Brasserie du Pêcheur, a French brewery, is suing the German government for DM1.8m (\$1.22m) after it was forced to stop exporting to Germany between 1981 and 1987 because its beer did not comply with German purity laws. In 1987 the European Court ruled the German law was contrary to European law.

Yesterday's judgments follow

FT WEATHER GUIDE

the Luxembourg court - in the Francovich case in Italy - in which it ruled that EU states could be forced to compensate people for government breaches of EU law.

The court said states would only have to pay damages if three conditions were met the EU law breached must confer rights on individuals; the breach must be sufficiently serious; and the damage must have been directly caused by the breach.

An infringement is considered serious If It is "manifest and grave". National courts must decide what is manifest and grave, looking at such factors as whether the EU rule was clear and precise and the measure of discretion left to the state in implementing It.

National courts will also have

to decide on the level of damages, although the European Court said they must amount to full compensation for the injury suffered and must be no less than the compensation for similar claims under domestic law. The court rejected the UK gov-

ernment's argument that damages should be payable only intentional or the state had been

Argentina senses tougher UK

## Japan tries to break budget impasse with talks

By Gerard Baker in Tokyo

The Japanese government last night attempted to break the impasse over next year's hudget by offering further talks with the main opposition party about a controversial plan to spend pnb-lic money on bailing out bank-

rupt housing loan companies.
Representatives of the ruling coalition and the opposition New Frontier party agreed to ettempt today to resolve differences over the scheme, which requires the budget to include Y685bn (\$6,4hn) of public funds towards liquidation of the companies, known as

The offer of talks followed another day of inconclusive drama in parliament as opposi-tion members cootinued physically to block entry to the committee chamber where the hudget vote was due to have been held on Monday.

The opposition wants the government to cancel the planned public contribution to the scheme and force hanks to pey more towards the liquidation of the jusen, which have buckled under the weight of their non-perform-

The NFP earlier rejected a proposal by the government to increase the apparent burden of the banks in the ballout plan. The coalition said increased restructuring efforts by the nation's big banks would enable them to provide a further Y500bn towards the liquidation over the

The extra profits generated by the restructuring would produce higher tax returns, which would partly offset the government's contribution to the scheme, Mr Kazo Watanabe, deputy chief cab-

inet secretary, claimed.
Under the original scheme, the banks that founded the jusen are required to pay Y3,500bn towards their liquidation, elong with Y1,700bn from other banks and Y530bn from the other large group of creditors, the nation's agricultural co-operatives. But the new proposal con-

tained no firm commitment to require the hanks to improve profitability. Opposition politi-cians said it was an attempt to "deceive" the public.
The government wants the

spending plans approved by the end of this week, well in advance of the new fiscal year which hegins on April 1. But without co-operation from the opposition that prospect is fast receding.

The two sides will discuss details of the government's latest proposals, which also include ( commitment to establish a parlia mentary investigation into the causes of the debacle, and a moratorium on finance ministry officials taking up posts in the private sector on retirement.

> Mad Hatter enters housing loan fray, Page 6 Editorial Comment, Page 11

### THE LEX COLUMN

## Israeli investments

For investors prepared to look past the political turmoil, Israel has attractions. The economy grew by nearly 7 per cent in 1995. This year it is expec-ted to expand by 6 per cent, fuelled by a wave of immigrants and the gradual erosion of the Arah boycott. Infletion is down to single digits and the gov-ernment's budget deficit for 1995 is estimated et 2.5 per cent of gross domestic product — better than many European countries, Israel is running a big current account deficit, but that is only to be expected as economic

growth has been sucking in imports.
Strong fundamentals made largel
one of the best performing emerging markets last year, with a rise of 17 per cent in dollar terms. But with forecast average earnings growth of 18 per cent this year, the stock market is still trading on just 11 times prospective earnings. A weaker shekel should belp exports, which make up 30 per cent of profits; and the index is perpered with high-technology electronics and phar-maceutical companies.

In the short term, the market may suffer from the after-shock of the receot bombings. But longer term, the harder line being adopted by Mr Shimon Peres, the prime minister, could help his Labour party win the May election. That would be regarded as positive hy international investors, who now account for around 10 per cent of the market's total capitalisation, compared with 1 per cent two years ego. Even allowing for the political risks, the market looks attractive.

#### CS Holding

CS Holding's 5 per cent profits increase last year is hardly impressive, given that 1994 earnings at the Swiss financial services group were depressed by grim market conditions.
At least revenues in all main business areas showed some improvement, which is more than Union Bank of Switzerland managed. But there was a nasty 11 per cent ingrease in provi-sions, which appears to reflect more nasty property loans at Swiss Volke-bank – an acquisition which has arguably been of greater benefit to competltors, by rationalising the hanking market, than to Credit Suisse itself.

Also disappointing is the 6 per cent rise in commission income - more could have been expected given the strong financial markets last year. Even the 31 per cent increase in trad-ing profits is not impressive; 1991 was an unusually had year for traders, 1995

FT-SE Eurotrack 200: Indices rebased

tion is the hits hanks took in 1894 caused them to reduce risk-taking. The result is that, while the quality of earnings may well have improved, the hounce back in trading profits is relatively modest. Swiss Bank Corpora-tion, probably the most aggressive of the hig three Swiss banks in this context, may prove to have fared better

when it reports next week.
While the prospects for the Swiss
banking sector may have been improved by rationalisation, slow eco-nomic growth continues to cap profits growth. At around 16 times 1995 earn-ings and with return on equity of around 9 per cent, CS still looks

#### UK cable TV

Nynex Cable Communications' share price has risen 30 per cent in the past week, in response to rupours abnut merger talks with TeleWest. Similarly, Videotron, a UK cable television group quoted in the US, has seen a 35 per cent jump in its stock since it was in effect put up for sale last month. In both cases, the presumution is that somebody will plank sumption is that somebody will plonk down a huge not of cash.
Investors should not count on it,

The most logical buyers for Nynex and Videotron would be other UK cable groups, as consolidation would out costs and boost their purchasing power. But because sew have cash. any deal is most likely to be an all-stock merger. And if the precedent of last year's merger between TeleWest and SBC Communications is anything to go by, a premium would not be paid. While some rise in Nynex and Videotron's share price would be

appropriate under such a scenarie to reflect the benefits of consolidation, there should be a similar rise in the purchaser's stock it would also not be anything like 30-25 per cent. One cannot rule out the possibility in talks with

untial buyers

that a hig foreign telecome group will pay cash — aiming to use cable as a platform to compete against BT in platform to compete against AT in telecome. But of the names bandled about, only KPN of the Neitherlands has so far shown interest in UK cable. The others - AT&T and Deutsche Telekom - seem unlikely to be attracted by an industry that is still tragmented and so unsuited for mounting a particular telecome service. mounting a national telecome service. Of course, if consolidation does proceed apage that may change.

ORH, the Irish huilding materials group, is the white sheep of the sector. Against the trend, it managed to note the up an impressive all per cent rise in 1985 profits. Its long term performance is could impressive with commence. is equally impressive, with compound growth of nearly 80 per cant annually for the last 25 years.

The question is whether this means its fortunes are due for a reversal. The

its fortunes are due for a reversal. The company warned yesterday it was unlikely to repeat last year's profits growth. Extremely favourable conditions in Ireland cannot continue indefinitely, and the US market has proceedly peaked; these were the largest contributors to profits last year.

But there is still plenty left in so in, ireland and the US may no longer drive growth, but there is room for an drive growth, but there is room for an upturn in other markets, such as the UK. Furthermore, the company's fermula for success is to boost earnings through a steady stream of amalian acquisitions, financed out of its strong cash flow. Quite simply, it has censistently chosen and managed these acquisitions better than competitors, and that strategy shows no sign of stalling.

The stock's rating, more or less in line with both the sector and the UK stock market, also suggests it is undervalued given its record. This is partly because, although it has a Lon-don listing, the fact that it is domi-oiled in Ireland means it is not considered a "must" for UK fund mana Given the international profile of the business and the limited exchange rate risk, any discount is likely in he further eroded.

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Jub Tide: Company:

Tokyn - Thursday 7 March at 7,00pm Hotel Okura, 2-10-4 Toranomon, Minani-ku Hong Kong - Monday 11 March: presentation at 6.15pm or drop in between 12 noon - 4.00pm Mandarin Oriental Hotel, 5 Connaught Road Taipei - Tuesday 12 March at 7,00pm Sherwood Hutel, 111 Minsheng E. Ruad

#### Asia (continued)

Knala Lumpur - Wednesday 13 March at 6,15pm Hotel Istana, 73 Jalan Raya Chulan Singapore - Thursday 14 March: presentation at 6.15pm or drop-in between 12 noon - 4.00pm Westin Stamford Hotel, 2 Stamford Road

#### Rest of the World

Frankfurt - Wednesday 27 March at 6,15pm Steigenberger Frankfurter Hof, Am Kaiserplatz Los Angeles - Monday 1 April The Biltmore, 506 S Grand Ave at 12,30pm Century Plaza Hotel, 2025 Ave of the Stars at 6.15pm Toronto - Monday 15 April at 6,15pm The Four Seasons Hutel, 21 Avenue Road

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London

FT 6/3/96

Business School

#### **Europe today** Moist oir will be drawn over the North Sea into

the Benefux and Germany along the eastern flank of a high pressure area over the British Isles. As a recult, cloud will be persistent with patchy drizzle and overnight tog. Northern France will be cloudy but cloud will be most at the UK will be fair and calm. Western parts of the UK will have sunny intervals, but eastern England will be cloudy with patchy drizzle. The southernmost Ibenan peninsula will have plenty of rain but elsewhere it will be dry with frequent sunny intervals. Abundant sun Is expected over Italy. Greece will turn dry bul rain and high-elevation snow will occur in Turkey. Five-day forecast

#### High pressure will shift towards western Russia

from temorrow. Calm conditions over central Europe will change to a drier south-easterly flow. As a result, it will become tair with bright intervals. Temperatures will rise to seasonal levels over western Europe as milder air is transported north. The Baltic states, Poland and Belarus will continue to have light daytime frost. The eastern Mediterranean will become more senied but central regions will continue to have

#### **TODAY'S TEMPERATURES**

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**FINANCIAL TIMES** 

## **COMPANIES & MARKETS**

Wednesday March 6 1996 **©THE FINANCIAL TIMES LIMITED 1996** 



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### Lotus in talks with potential buyers

Lotus, the UK engineering company best known for its sports cars, confirmed it was talking to potential buyers, but denied it had been sold to Daewoo, the acquisitive Korean industrial group. Page 14

North American wood pulp mills have again slashed prices amid recriminations among producers over the pulp market's recent decline. Weyerhaeuser, one of the biggest producers, set the ball rolling last week by cutting the list price of Northern Bleached Softwood Kraft (NBSK), the industry's benchmark product, by 17 per cent to \$600 a tonne. The

cut. Page 19

its philosophy remained to be a "stand-alone" organisation, despite recent calls from ministers for large Belgian banks to merge and form a "megabank", and speculation that it was considering a merger with Banque Bruxelles Lambert, the fourth biggest bank. Page 14

Hacco downbest for 1996 after 20% slide Hong Kong Aircraft Engineering Company (Hacco), a listed subsidiary of the Swire group, announced a 20 per cent fall in net profits to HK\$331.3m (US\$42.9m) for 1995 and warned of further difficulties and a fall in margins this year. Page 16

Shares in WR Grace, the embattled US chemicals company, jumped 11 per cent on news that it had rejected a merger approach from Hercules, a fellow US speciality chemicals producer. Page 17

Corel, which bought WordPerfect, the word process ing software maker, in January from Novell, the networking software specialist, is eager to show that the deal has the makings of an exciting and rewarding partnership. The Canadian software maker'e efforts underscore the high stakes riding on its new acquisition, both for WordPerfect and itself. Page 17

Emap nears deal to buy French magazines Emap, the UK publishing and media group, is close to purchasing three leading French consumer magazines from Compagnie Luxembourgeoise de Tele-diffusion for £146m (\$229m). Page 18

Marks and Spencer, the UK retailer, is to sell its chain of 85 D'Allaird's stores in Canada to Comark, one of the country's largest speciality retailers.

**अस्तिकार प्राप्तः । १५** मध्य Marie Marie Control leased and a convey of Species the property of the property per trans. Note to the manufacture

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North American pulp mills slash kraft price

latest reduction comes just a month after a similar

**Belgian bank to stand alone** Générale de Banque, Belgium's largest bank, said

WR Grace enubs Hercules merger offer

High stakes in WordPerfect partnership

M&S to sell Canadian stores chain

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Bridgestone	4	Maseca	
British Aerospace	12	Meekatharra Minerals	
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CRH		Noel Group	
OS Holding		Novel	
Canal Plus		Pacific Dunlop	
Cecchi Gori		Penta	
Cernex		Paugeot	•
Coles Myer		Porsche	
Corel		Portucal-Industrial	
DG Bank		RJR Nabisco	
Daewoo		Renault	
Deutsche Telekom		Rybynek Motors	
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		Southcorp	
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Varket Statistics

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Chief price changes yesterday Pails Hertsil Spb SA Valeo TOKYO (Yes) Rises Desty's Japan Nachi Rajinashi

# RJR lifts dividend to woo investors

By Richard Tomkins in New York

RJR Nabisco, the US tobacco and food group fighting efforts to force it into a break-up, yesterday tried to win back shareholders' allegiance by announcing a 23 per cent increase in its dividend and a

\$100m share repurchase programme. The strategy carries risks because it will soak up RJR Nabisco'a scarce cash resources, but the big US credit rating agencies yesterday backed off from threats to downgrade the company's debt to junk bond status, saying any action hinged on the outcome of a shareholder dispute.

Two weeks ago Mr Bennett LeBow and Mr Carl Icahn, the US corporate raiders pressing RJR Nabisco to spin off its food business, claimed victory in the first round of their battle by announcing that a

disappoints

income rise

CS Holding, the financial services

group built around Credit Suisse.

yesterday posted a 5 per cent rise

in 1994 net income to SFr1.4bn

This was below many inves-

tors' expectations but slightly

better than the 3.8 per cent rise

reported by rival Union Bank of Switzerland two weeks ago, Earn-

ings per share were down 2.6 per

cent, to SFr7.59, because of an 8.2

per cent rise in the average num-

The shares fell SFr2.5 to

SFr112.5 on the Swiss stock mar-

ket, Analysts said it was difficult

to discern underlying business

trends because of a number of

in 1994, the group's net income

was lifted by the sale of a 30 per

cent stake in its derivatives sub-

sidiary for SFr540m. The 1995

operating income was helped by

changes in accounting practices and the release of SFT575m in

retained earnings to cover bad

loans at Swiss Volksbank, a sub-

Mr Hans Kaufmann, banking

analyst at Bank Julius Baer in Zurich, complained of "account-

ing gimmicks" and wondered

whether the group should be assigned a higher risk premium

Group net interest income rose 6 per cent, to SFr3.26hn, but pro-visions rose 11 per cent, to

SFr2.6bn. This reflected the "per-sistently difficult situation" in

the Swiss property market, the slow growth of the Swiss econ-omy and the need for further aid

ber of shares outstanding.

exceptional items.

with 5%

By lan Rodger In Zurich

Tobacco and food group to fight raiders' break-up proposals with \$100m buy-back

majority in favour of their proposal. RJR Nablsco is checking the figures, but it has vowed not to press ahead with a spin-off even if the vote is confirmed. It says an immediate spin-off would be blocked by anti-tobacco plaintiffs with litt-gation pending against the company. Yesterday, RJR Nabisco tried to appease

shareholders by promising thet the Nab-isco food business would be spun off "at the earliest possible time". In the meantime, it said, the board had decided to return a greater share of the company's free cash flows to shareholders by lifting

Zurich

14.74

3.13%

A service and the service of the ser

14 per cent at SFr4.71bn.

Swiss franc.

contributions.

Lex, Page 12

Pre-tax profit of the group's

flagship bank, Credit Suisse

soared 40 per cent, to SFrl.86bn

and Volksbank achiaved net

income of SFr163m after restruct-

uring. Net income of Credit Sui-

sse Financial Products, the deriv-

atives subsidiary, fell 11 per cent

to SFr298m because of the strong

CS First Boston, the US invest-

ment bank, lifted net income by a

third to \$207m after restructur

ing Both the private bank sub-sidiaries and CS Life mada higher

SFr7.99\*

CS Holding beats rival but fails to impress investors

Swiss bank COMPANY PROFILE CS Holding

Main listing

Historic P/E

Gross yield

Share price

Earnings per share

Current share price

relative to the SMI Index

shareholder vote had produced a narrow the quarterly dividend from \$0.375 a share

The company also committed itself to buying back about 10m of its common shares over the next few years, starting with \$100m worth of stock this year. It currently has 272m shares outstanding, or 330m fully diluted.

The company also announced the formation of a new board committee consisting entirely of outside directors to oversee corporate governance and to take responsibillty for nominating new directors.

The dividend and share buy-back moves recall measures taken by Philip Morris.

the biggest US tobacco and food group, when it backed away from a break-up in 1994. Philip Morris increased its dividend by 19.6 per cent and started a \$6bn share

Unlike Philip Morris, however, RJR Nabisco is weighed down with about \$10hn of debt - a hangover from Kohlberg Kravis Roberts's \$25bn leveraged bny-out in

Last week Standard & Poor's, the US credit rating agency, warned that further pressures on the company's "limited financial flexibility" would risk a lowering of its

debt rating. Mr Stevan Goldstone, RJR Nabisco's

chief executive, said yesterday that the company's "improving outlook" made him confident that the policies were sustain-

## Coles Myer rejects proposal to break up

هكذامن العمل

By Nikki Tait in Sydney

Coles Myer, Australia's blggest retailer, said yesterday it had decided against pursuing any further the idea of breaking up into separately-listed operating units.
Instead, it would concentrate

Myer's core retail brands". Mr Nobby Clark, Coles's new chairman, described the approach as "low-risk" and "well-dafined", with "significant potential of increasing shareholder value". The board, he said, was "sat-

corporate governance standards. The battle - which along with concerns over profits growth has helped to depress the share price - ended late last year. New nondirectors eppointed to the board, and Mr

board. Institutional investors tanded to dismiss Mr Lew'e break-up

The break-up plan had been examined by three advisers -Smith Barney, Macquarie Bank, and KPMG Corporate Financa. Mr Peter Bartels, Coles's chief

Coles Myer

on "the current strategy of coordinating and integrating Coles

isfied that management projec-

tions of the bottom-line benefits are realistic and sustainable". The plan to break up the group was mooted by Mr Solomon Lew, Coles's former chairman, when he was fighting institutional chareholders over the group's

**8**xecutive Clark, a former National Australia Bank chief, was installed as non-executive chairman. Mr Lew, who is Coles's biggest single shareholder, remained on tha

suggestion as a diversionary tac-tic, although they said they were happy to have the idea investi-

Share price relative to the All Ordinaries index

Source: FT Extel

executive, declined to detail their findings, or to say whether the three firms had come up with similar conclusions.

However, he said the board's decision was in fevour of the option which would maximise shareholder value.

Coles stressed that it would continue to divest non-core assets. It said it was retaining KPMG and Macquarie Bank to advise on its remaining property portfolio. More than A\$650mworth (US\$500m) of property assets have been sold in the past 18 months.

The existing restructuring programme has involved refocusing the company's brands and a better integration of services to eliminate diplication and cut

Coles has outsourced a number of group functions - such as vehicla laasing. Mr Bartals suggested the group might have more to say on further costsavinge when It announces interim profits this month.

## to raise \$118m in Czech sale

By Vincent Boland in Prague, Richard Tomkins in New York and Roderick Oram in London

Kmart, the troubled US discount store group, looks set to raise a badly-needed \$117.5m by selling its 13 stores in the Czech and Slovak republics to Tesco, one of the biggest UK retailers.

The proposed sale, expected to be completed in April, marks the end of Kmart's only venture into Europe. It bought the stores from the then Czechoslovakian government in 1992, speeding an estimated \$120m on acquiring and renovating the chain.

Kmart, which operates more than 2,000 discount superstores in the US, is the world's second biggest retailer, but it bas been suffering acute financial difficulties because of its failure to compete with Wal-Mart and other, more successful, US discount

store groups in its bome market. After 11 quarters of poor earn ings, its stock has plummeted, its debt has been downgraded to junk bood status and it has been struggling to stay oot of chapter 11 bankruptcy protection by selling non-core assets and renego-tiating its loans,

Mr Floyd Hall, who took over as chairman and chief executive last year, said the Czech and Slovak stores had enjoyed solid sales increases and were expec-ted to show a profit for the year to January 1996. "However, the sale of these businesses is in keeping with our determination to focus our energies and resources on our core operations in the US and North America."

"Longer term, we expect that there will be greater international growth opportunities for Kmart in Mexico, Central and Sonth America." he said. Kmart's international operations include stores in Canada, Guam, Puerto Rico and the US Virgin Islands, plus joint ventures in Mexico and Singapore.

For Tesco, the purchase "completes the geographic jigsaw for us in central Europe", said Mr David Wild, the UK group's European corporate development director. In November 1994, it paid £8m (\$12m) for a Polish store chain and a year later it bought a group in Hungary for £15m.
The latest ecquisition, among

the biggest UK direct investments to date in the two countries, will give Tesco six department stores in the Czech Republic and seven in Slovakia. Tha purchase is expected to be finalised next month.

### **Barry Riley**

to Volksbank. Commission

income was also up 6 per cent, to

SFr4.13bn, although the result

was flattered by first-time consol-

idated contributions from the Credis investment funds subsid-

Trading income jumped 21 per

cent, to SFr2.99bn, end other

income remained a still high

Total operating income

advancad 5 par cant, to

SFr11.66bn, while operating

axpenses fell 1 per cent to SFr6.95bn, leaving profit before taxes and provisions up

SFr1.14bn, thanks to the released

retained earnings.

iary and Neue Aargauer Bank.

## New World spurns the Old World's last stand



Curlously, the Bank Credit Analyst conference, which closed yesterday in London, marked the influantial Montreal baaed financial forecasting firm's first collective visit to Europe. And if the Atlantic is not much

of a physical barrier these days, the main impression to emerge from the conference was of an extraordinary gulf of mutnal incomprehension between investors in the US and Europe. Europeans are suspicious of the claimed corporate sector miracle in the US, and remain con-

vinced Wall Street's amazing bull market represents a dangerous trap that must end in disaster. As for North Americans, they regard Europe as a kind of industrial museum which threatens to become a basket case. They cannot understand why such enormous political and financial resources are being expended upon Economic and Monetary Union, which instead of being a marginal exercise in efficiency and integration threatens to become seriously disruptive.

At the very least, it is distracting attention from the problems of improving competitiveness and cutting unemployment. At worst it may undermine the European Union, a case of fiddling while the Treaty of Rome burns. I have spelt out the underexposure of European investors to

Wall Street several times. UK pension funds, for example, have

only 18 per cent of their overseas

equity portfolios in the US, whereas Wall Street represents about 48 per cent of the World Ex

UK Index. The opportunity cost of this underweighting over the past year has been high. Europe's anti-US prejndices beva several origins. The US,

with its low savings and perma-nent trade deficit, has been considered financially unsound; its politics, with government shut-downs and weird fringe pundits running for president, appear bizarre; its volatile industries can seem, to stuffy Europeans, to be based on Mejobs and candylloss.

North Americans regard Europe as an industrial museum

Will Wall Street indeed crash? The BCA editors had some comfort in the short term for the European audience. The US stock market has become highly speculative and is vulnerable to a likely acceleration of economic growth during the next two or three quarters. The long bond yield could rise to 7 per cent and Wall Street is likely to tumble by 10-20 per cent.

However, that would be a buying opportunity, they say. The economy is on a long-wave expansion. The Wall Street nptrend, which began in 1982, could run another eight or 10 years. Europeans must accept this last chance to get on board. The BCA view on continental Europe, however, was that countries such as France and Ger-

many were lagging many years behind the US, by trying to resist the "creativa destroction" required by the long cycle. As for Emu, Mr Bernard Con-

nolly, ejected from the Brussels bureaucracy last yaar for betrayal by writing his book *The Rotten Heart of Europe*, turned up to continue the attack. He por trayed Emu as the "bureaucrats' last stand", an attempt to recreate the dirigiste golden age of the 1950s and 1960s and exclude the disruptive influence of the Asians and Americans, while politicians were encouraged to dream of the fame they would gain for making

possible eternal peace. None of this was calculated to restore the enthusiasm of American investors, especially as Mr Connolly accepted that, despite the controversy and the missed convergence targets, Emn was more likely to happen than not. Even over-indebted Belgium would be allowed in, perhaps with a eix-month delay as a "bone for the Bundesbank".

This was all good knockabout stuff. Yet the curious point is that for all the differences between the US and Europe, 10year bond yields are very similar at 6.3 per cent in Germany and 6.0 per cent in the US. Europeans might argue the margin in favour of the US

reflects trade deficit recycling by Asian central banks. Americans might say the D-Mark has lost status because it will be merged into a potentially soft euro. But there is not a great deal in it. In terms of equities, however, the European markets have trailed Wall Street by 18 per cent since the beginning of 1995. The world may be becoming smaller, but the Atlantic is getting wider.

This announcement appears as a matter of record only

£265,000,000

Funding for the Management Buy-In of

## **BRITISH** ALUMINIUM

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ALL STATES

Belgian bank to 'stand alone'

By John Simkins In Milan

The dog with six legs - the emolem of Eni, the Italian oll, gas and chemicals group again raced ahead in 1995 and has not disappointed its new

The government floated 15 per cent of the group, which is among the world's eight leading quoted oil companies, last November and shareholders will be offered a reward in the form of a dividend pay-out totalling at least 40 per cent of estimated 1995 net profits of

L4,300bn (\$2.77hn). The estimated consolidated results, released late on Monday, were in line with expectations - net profits were up 33 per cent - and follow a strong

performance in 1994. Restructuring under Mr Franco Beroabė, managing director, has involved concentrating on exploration, produc-tion, refining and distribution and the sale of former lossmaking non-core activities.

The hulk of these disposals last year took place in the petrocbemicsls sector, where operating income rose by Ll,600bn to Ll,950bn. Enichem, the chemicals subsidiary, will return to profit this year after incurring a L857bn net loss in

Mr Alan Marshall, oil analyst at Robert Fleming Securities. the UK stockbroker, said be expected Eni's share price -which closed last night L57 higher at L6,007, after touching a high of L6,050 - to outperform the Italian market this

year. Eni's issue price last year, fixed at the bottom end of the range during difficult market cooditions, was L5,250. Mr Marsball said he had a 12

months target for the share price of L6.700. He said: "At under 12 times earnings per share in 1995 and under four times cash flow per share, it looks quite cheap both against the market as a whole and the oil and gas sector.

"The company is still running quite a lot of deht, and oil and gas companies are not usually highly geared."

Net deht was reduced by L6,000bn to L17,800bn, bringing the net debt to equity ratio. including minority interests, to 0.7 compared with 1.1 in 1994. Exploration and production,

which is conducted by Agip, boosted operating income by 8 per cent to about L4,000hn, partly because of higher oil prices. Natural gas supply, in which the main division is Snam, increased operating income hy 5 per cent to L3,250hn. Italy imports twothirds of its natural gas con-sumption to conserve domestic reserves, with Eni huying from Algeria, Russia and the Nether-

Besides completing its disposals, Eni will upgrade Its Agip Petroli service station network. A further sale of sbares will depend on market conditions and a decision by the government. The Treasury controls a golden share which

Générale de Banque, Belgium's largest bank, said yesterday its philosophy remained to be a "stand-alone" organisation, despite recent calls from ministers for large Belgian banks to merge and form a "megabank".

and speculation that it was considering a merger with Banque Bruxelles Lambert, the fourth biggest bank. The statement came as the bank announced an S.1 per cent increase in 1995 net profit

to BFr13.7bn (\$451.7m), although provisions. write-downs and depreciation increased 27 per cent to BFr20.2hn, partly due to provisions on loans to Eurotunnel, the Channel tunnel operator. Asked if Générale de Banque

would consider merging with other Belgian groups, Mr Ferdinand Chaffart, chief executive, said: "It is clear that our basic philosophy is a philosophy of stand-alone." However, he added, "other possibilities"

would never be ruled out. His comments followed a call in January by Mr. Philippe Maystadt, the Belgian finance minister, supported by Mr Elio Di Rupo, economics minister, for the creation of a Belgian banking group that was large enough to compete in the inter-

national market. Their statements were ecb-oed by Mr Etienne Davignon, chairman of Societé Générale de Belgique, which holds 30 per and improve competitiveness. Mr Davignon told a Belgian newspaper be did "not exclude a merger of Générale de Banque with other Belgian

Mr Chaffart said yesterday Générale de Banque had already made great strides in its attempts to develop from "a Belgian bank with branches ahroad into a European bank with its roots in Belgium". The proportion of net profit

coming from outside Belgium was expected to increase from 40 per cent in 1995 to about 60 per cent this year. Last year the bank acquired Credit Lyonnais Nederland, the

Dutch subsidiary of the French state-owned hank.

gest, France's eighth-largest asset management company, for FFr660m (\$131.8m).

Mr Chaffart said the bank was still seeking acquisitions, although a rights issue might be required to raise funds.

Générale de Banque's gross income increased 5.6 per cent to BFr113.4hn, with interest income up 1 per cent, and noninterest income up 15.3 per cent, despite the slowdown in economic growth which Mr Chaffart said bad produced only a slight increase in loan demand in most European

countries last year. General expenses increased 2.5 per cent to BFr68bn. The bank proposes to increase its net dividend on ordinary

#### cent of Générale de Banque, BFr21.5bn, giving it a foothold in the Dutch market. It also wbo said the bank should look for links that would add value

Fielmann disappoints the market

On Monday, Fielmann joined the growing list of busted German growth stocks. Europe's biggest leading opti-cal chain may have revealed a 43 per cent leap in 1995 profits, but it then forecast a mere 5 per cent gain in the current year, blaming increased marketing costs.

The preference shares, which bsd rocketed by more than 70 per cent during the past 12 months, immediately came back DM13.20, or 15.7 per cent. to DM70.80, and fell another DM1.90 yesterday to DM68.90, s

2.7 per cent drop. The optical group joined a dejected trail of recent disap-

and Wella, the hair care group, were among the invest-ment selections when growth stocks became fashionable last

Traditionally, investors in the German market have pre-ferred hig cyclicals, like the automotive groups and chemicals, or the defensive qualities of its financial and utilities sectors.

Fielmann's attraction was its combination of international purchasing power and vertical integration. The group is a spectacle frame manufacturer, retailer, engineer and ophthalmic optician.

The company bad been producing double-digit sales and earnings growth in recent

to the DAX Index

over the next three to five

In Germany, the argument

the market, generating its growth through high volume.

The volume was available because almost 70 per cent of Germans in the 45 to 59 age group were wearers; that applied to nearly 100 per cent of senior citizens; and with the age pyramid for Germany becoming increasingly heavy, there were indications that there was further scope for the market to expand.

These opportunities still exist. But, says Mr Stephan Muelheim st brokers Dillon Read, stocks in and around the retailing sector have had to hattle with depressed German consumption over the past two years: department stores, for example, sadly ontperformed the Dax index last year with a rise of just 0.1 per cent, follow-

#### EUROPEAN NEWS DIGEST

## Veba and Metro in digital TV venture

Two of Europe's largest companies, Veba of Germany and the Swiss retail group Metro, yesterday said they would join forces to introduce digital television in Germany, putting paid to painstaking efforts to ensure a common digital television standard in Germany, Europe's largest market.

The Veba/Metro alliance will be pitted against another consortia of German companies, including the state-owned telecoms operator Dentsche Telekom and the media group Bertelsmann, which last year created a rival consortium, Multimedia Betriebsgesellschaft (MMBG), in which Veba was supposed to take a stake.

News of the alliance is a significant success for Mr Leo Kirch, the German media mogul who had been at loggerheads with the MMBG consortium on the question of which decoder should be used to access digital television services such as video on demand and home shopping. Veba and Metro yesterday said they would use a decoder launched by Mr Kirch last year, known as the d-box, and not MMBC's rival technology. All of the German companies involved in digital television appeared to have reached preliminary agreement on a single standard in December.

The rival MMBG consortium also includes ARD and ZDF. the two German public-sector television channels and Canal Plus, the French pay-TV channel partly owned by
Bertelsmann. The Veha/Metro alliance said it would start its first field trials in coming mouths and expected to introduce a full range of digital television services not later than September 1.

Michael Lindemann, Bonn

#### Portucel ahead five-fold

A cyclical rise in pulp prices helped Portucel-Industrial, the world's second largest producer of bleached eucalyptus pulp, lift net consolidated profit almost fivefold to Es18.1bm (\$118m) in 1995 from Es3.2bn in 1994. The strong performance was a driven by a sharp rise in pulp prices, which peaked in the third quarter of 1995. But analysts forecast a fall in the group's earnings this year due to an earlier-than expected downshift in

Portugal's new socialist government plans to continue the privatisation of Portucel-I in 1997 following a restructuring of the country's pulp and paper sector. It is expected to announce plans for some form of merger or association between Portucel-I, Soporcel, Portugal's second-largest pulp and paper producer, and inapa. a paper manufacturer, which are all directly or indirectly controlled by the state. An initial public offer of 40 per cent of Portucel-I raised Es35.65bn last

Sales rose 34 per cent to Es70.5bn from Es52.5bn in 1994, the group said. Exports, mainly to western Europe, represented 66 per cent of the total. Net cash flow climbed 150 per cent to Es25bn. Portucel will pay a 1996 dividend of Es45 a share, representing a dividend yield of 5.1 per cent. The company said it was setting aside Es1.85bn to ensure a similar level of payments in years when profits were hit by cyclical Peter Wise, Lisbon

#### DG Bank bounces back

DG Bank Deutsche Genossenschaftsbank, the umbrella organisation of Germany's co-operative banks, bounced back to normality after a crisis in the early 1990s. It reported an 18.8 per cent increase in 1995 operating profits to DM553m (\$348m) before risk provisions, and a rise in the interest surplus by 5.3 per cent to DM1.18bn, DG Bank has decided to resuma dividend payments to its owners, a decision which Mr Bernd Thiemann, chairman, described as an "important signal". DG Bank's financing operations increased income by 8.7 per cent to DM165.3m. After taking out individual and country risks operating profits were DM345.6m after a loss of DM214m in Wolfgang Munchau, Frankfurt

#### Elektrowatt rises to SFr178m

Elektrowatt, the Swiss electricity and engineering group, posted net profits after minorities up from SFr172m to SFr178m (\$148m) for the year to the end-September. Operating profits rose from SFr469m to SFr489m on sales up from SFr4.94bn to SFr4.98bn. Earnings per share fell from SFr21.60 to Sfr20.80. The group expected a further improvement in sales rating profits in the year to Sept 19 in January it would propose an unchanged SFr11.50 dividend.

#### Fokker 'must go bankrupt'

Fokker, the struggling Dutch airplane maker, has repeated that bankruptcy was an unavoidable step in its continuing quest to secure its future. Mr Ben van Schaik, management board chairman, told Dutch television, "Only then can Fokker Ronald van de Erol, Amsterdam.

#### VNU posts 25% improvement Better results from business publishing in the US and Europe

were the main factor behind a 26 per cent increase in 1995 net profits before extraordinary items, at VNU, the Dutch publisher. Net profits before extraordinaries rose from Fl 218m to Fl 274m (\$166m), producing a 19 per cent increase in profits per-share from Fl 1.21 to Fl 1.44. VNU's dividend is to be raised 20 per cent from Fl 0.40 to Fl 0.48. Net profit, including extraordinary items, more than doubled from FI 208m to FI 430m, largely reflecting an earlier reported FI 163m gain on the sale of Disclosure, the group's US information company. Turnover rose 10 per cent to Fl 3.05bn, with acquisitions.

accounting for slightly more than half the increase.

Ronald van de Krol

#### Porsche sees surge in output

Porsche, the German sports car group which saw sales plummet in the early 1990s, expects to boost output to 18,500 units in the 1995-96 financial year, from 17,268 in 1994-95 and virtually double that to about 30,000 in 1996-97.

The sharp expansion would come from the group's new two-seater "Boxster" convertible due to be launched in September. Mr Hans Riedel, Porsche's bead of sales and marketing, said more than 10,000 customers had made down-payments on Boxsters. Scotching lears that many would be trading down from Porsche's dearer 911 range, he said research into 2,500 potential customers had shown that 80 per cent were first-time huyers.

Porsche expected output to be divided equally between the 911 and the Boxster once the newcomer was in full production. Mr Wendelin Wiedeking, Porsche's chief executive, revealed the car, with a mid-mounted six-cylinder engine, would cost DM76,500 (\$52,000) in Germany.

The company, which made net profits of DM10m in the first half of the current year, declined to give a full-year forecast beyond saying it should be "clearly hetter". Sales to the end of January 1996 jumped 17 per cent to 9.570, compared with the same period last year.

Hada Simonton, General Haig Simonian, Geneva

#### Danish shipyard to close

A reconstruction plan to save Copenhagen's Burmeister & Wain Shipyard collapsed amid mutual recriminations between the yard's creditors. The Danish company's receivers said they would now close the yard in about 14 days when it had completed its last order.

The reconstruction plan was provisionally agreed on February 17, hut yesterday American insurance companies bolding convertible bonds in the shipyard said the agreement terms had been violated.

Two creditors, insurance company Old Mntual and Chemical Industrial Bank, have made a side-deal by which they would receive cash for their bonds from Japan's Mitsui Engineering Company. Mr Wilbur Ross, of Rothschilds in New York, acting for US bondholders, said this constituted unfair preferential

Hilary Barnes, Copenhagen

#### prevents sharebolders from pointments: Escom, the comwent, 37m people wear specta-cles. Fielmann produces the years, and some analysts were puter group: Hornhach, the taking more than 3 per cent going for annual sales growth without its permission.

By Peter Norman In Bonn

Bayerische Vereinsbank, the Munich-based bank, yesterday increased its dividend for 1995 after strong growth in group profits in the second half of

The bank, which last year changed the nominal value of its shares to DM5 from DM50, will pay DM1.5 per DM5 nominal share against DM14.5 per DM50 share the previous year. Group net profit increased 16.3 per cent, from DM565m in

1994 to DM657m (\$445m), while operating profit after loan loss provisions rose 29.9 per cent. from DM1.06hn to DML38hn.

Joining a slowly growing trend among large German companies to greater transpar-

Bayerische Vereinsbank lifts payout after late surge some important group results according to International

Accounting Standards. Yesterday's figures pointed to a strong recovery in second half profits. The bank earlier reported that its operating profit at the end of June was 6.6 per cent less than half the operating profit reported for ency in financial reporting, the

dne on March 21, would give at the end of September were from trading on the hank's DM1.06hn. Running costs 5.3 per cent up on three quarters of the previous year's

The company said the recov-ery reflected a strong performance by group members, partlculsrly Vereinsbank's mortgage bank subsidiary. The group's stock of mortgage lend-ing increased 15 per cent to 1994. Using the same method of DM107bn. There was also a comparison, operating profits

own account, from DM7m in 1994 to DM270m. In 1993, the group earned DM318m from own-account trading.

Profits last year were also belped by a 24 per cent drop in loan loss provisions, from DM949m to DM721m. The group's interest surplus increased 2.7 per cent to DM4.43bn, while commission income dropped 2.3 per cent to increased 6 per cent to DM3.66bn bnt this included substantial investment in Ger-

many and abroad. The bank said the rate of cost increases was halved last year from 1994, when outlays had jumped from DM3.08hn in 1993 to DM3,46bn

The group balance sheet total rose 12.1 per cent last

Haig Simonian talks to manufacturers at the Geneva Motor Show, which opened yesterday

## Audi upbeat about demand for new models

wagen group, expects another strong year in 1996 on the back balf of last year jumped to The new mod of new models and continuing

strong demand for its highlypopular A4 salcon. Mr Herbert Demel, chairman, said in an interview that the company "boped to repeat the success of 1995", this year. Audi's full results will not be published until April. HowDM250m, while sales for the full year climbed almost 20 per

cent to more than 447,000 units, buoyed by the A4. Audi built about 260,000 A4s and 30,000 of the previous Audi 30 model in 1995. Mr Demel said sales this year were expected to remain stable, in spite of ever. analysts expect pre-tax the introduction of an entirely profits to exceed DM400m new car, the smaller AS, which

Audl, the executive cars (\$271m), compared with subsidiary of Germany's Volks-DM189m in 1994. with is expected to attract at least mid-range model and a 90 bp new aluminium TT convertible diesel. A bigh-performance and compé, unveiled last year.

The new model, a three-dcor batchback built on the platform of VW's next generation Golf model, due next year, would go on sale in the autumn. Mr Demel declined to give a sales target, but said Audi had the capacity to build up to 100,000 units a year.

Sales would start with a range of medium-priced vebicles, including a 125 bp

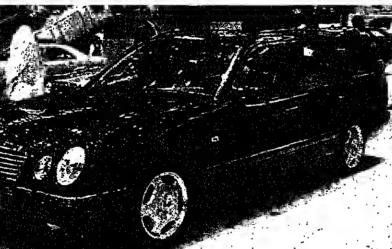
The A3 marks a further step in Audi's drive to broaden its range and capture younger motorists. Mr Demel said the introduction of convertibles. coupes and station wagons had already lowered the average

age of owners to about 48. The appeal to the "young in spirit", reinforced by the A3, should be accelerated by the

150 bp turbocharged version would follow.

Audi expects to build about 20,000 coupés a year, with sales 20,000 coupés a year, with sales starting in 1998. Sales of the convertible, expected to be launched in 1998, should reach

about 10,000 units annually. The new cars will continue Audi's innovative use of alu-minium for some of its vehicles. Mr Demel confirmed that parts of its next-generation A6 salcon would be alu-



Mercedes Benz shows off its new E-Class at the 66th Geneva Motor Show

## Lotus confirms takeover talks

sleek sports cars, is talking to potential buyers. However, yes-terday it denied it had already been sold to Daewoo, the acquisitive Korean industrial

group.
"The sbareholders bave decided to allow other parties the opportunity to participate through investment ... to strengtheo the company structure," the company said. All questions about potential

investors were referred to a prepared statement, which said: "The negotiations do not involve financial organisations. but industrial companies with strong financial resources to carry out their own programmes in conjunction with those of Lotus to take advantage of synergies."

Lotus ild not deny it was talking to Daewoo. However, Mr Neeraj Kapur, the UK company's finance director, said reports of a sale were "com-

has been put in doubt because of the financial difficulties of Mr Romano Artioli, its owner.

His problems came to a head when s court in Modena, Italy declared Bugatti Automobili insolvent last year. Mr Artioli re-established Bugatti to build highly-expensive "supercars" in the early 1990s and hought Lotus from General Motors two years ago.

Bugatti's financial plight triggered speculation of possihle side-effects for Lotus. How-

the court action. The impact of the Bugatti bankruptcy - and the ultimate ownership of Lotus, as well as its relationship with Mr Artioli's other activities - was embourg-based bolding company (which was also helieved to control Lotus).

The company says there is strong demand for its cars and engineering services. Net earnings rose to £5.8m (\$8.9m) last year from £3.6m, while sales climbed by more than 20 per cent to \$65m from \$54m. Mr Kapur said Lotus needed extra capital to finance its

engineering and carmaking activities. Engineering, which has always heen the most attractive side of the business for potential suitors, bas recently invested in new test facilities and has a long order

could compromise its independence to solicit business from other car companies, raising doubts about the likelihood of Following the court action. a sale to Daewoo.

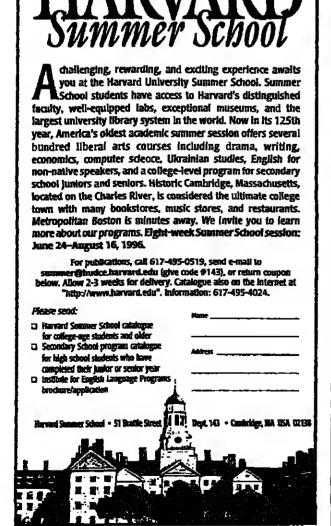
■ The Peugeot chairman, Mr Jacques Caivet, said be expec-ted the French car market to grow 1 per cent in 1996. In flat growth for the market this year. He reiterated an earlier forecast that the European car market would grow by between 2 per cent and 2.5 per cent this year. His European forecast agreed with that of Mr Louis Schweitzer, Renault's chairman. Mr Calvet said that in France, after a calamitons December, sales bad rebounded in January and February. He said that because of currency factors, manufac-turers in Italy, Spain and the UK had a considerable advantage over French and German AFX News, Geneva ■ Mr Calvet warned that Pengeot would stop buying from Valeo, the French components group, if the car parts company were taken over by a group that be considered detrimental to the French carmaker's interests. "If it [the huyer] did not please me, I would progressively halt my purchases from Valeo," Mr Calvet said. He said he did not want Valeo controlled by a carmaker - or a components group under the control of s carmaker or a supplier which would subsequently win a monopoly position. Reuter, Geneva ■ Mr Helmnt Werner, chairman of Mercedes-Benz, said the German carmaker's 1996 results would be at least as good as the DM2bn-plus figure it achieved in 1995. In 1994, Mercedes generated a profit of DM1.85bn. The Mercedes chairman also said the company as a whole was making a return on capital of about 12 per cent. Parts of the company were at more than 80 per cent. Mr Werner said production of the E-class cars had reached capacity after strong demand for the car at he start of this year. He said January domes-tic car sales had climbed 15 per cent, with US car sales up 26 per cent and Japanese car sales up 21 per cent from a year earlier. Mr Werner was speaking st a dinner to launch Mercedes' E and C class estate models and V class family bus. Reuter and AFX News, Geneva Any sale to a big carmaker General Motors (Europe) 1995 net profit rose 14.5 per cent from \$695m to \$796m a year earlier, Mr Louis Hnghes, General Motors vice-chairman, treatment for two creditors. AFX News, Geneva

Lotus, the UK engineering pletely 100 per cent incorrect".

company hest known for its The long-term future of Mr Artioli's lawyers appear to have conducted various legal Lotus, which has about 1,000 moves to ensure Lotus's isolastaff at its base near Norwich, tion from Bugatti and its Lux-

ever, the UK company has maintained it is unaffected by

thrown into confusion yester-



DIGEST venture

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Global Performance

**One Firm Made A World Of Difference** In Equity Capital Markets In 1995.

		ENI S.p.A. Initial Public Offering Italy Energy	E.I. du Pont de Nemours Common Stock Limited States Chemicals	Nordbanken Initial Public Offerin Sweden Banking
\$750,000,000  Sandoz  onvertible Bonds  Sinterrinal  Pharmaceuticals	\$620,000,000  Gueci Group NV°  Initial Public Offering  India  Lucsury Goods	\$563,500,000  Case Corporation*  Cummon Stock  United States  Machinery	\$500,000,000 SwissRe Finance Ltd. OID Convertible Bonds	\$468,000,000  Royal PTT  Nederland NV  Rest of World Translet  Common Stock  Netnerlands  Telecommunications
UCAR Iternational	\$450,000,000 International Paper Convertible Preferred	\$383,592,500 SwissRe Finance Ltd.	\$358,800,000  Diamond Offshore Drilling Initial Public Offering	\$321,000,000  JSC Oil Company LUKO

The name: CS First Boston, Last year we led more than 50 issues raising over \$15 billion of equity capital for our clients. Among them were many of the

\$750,000,000  Sandoz  Convertible Bonds  Santonia al  Pharmaceuticals	\$620,000,000 Gueei Group NV° Initial Public Offering Isali: Lucture Goods	\$563,500,000  Case Corporation*  Cummon Stock  United States  Machinery	\$500,000,000 SwissRe Finance Ltd. OID Convertible Bonds Finance	\$468,000,000  Royal PTT Nederland NV*  Rest of World Truncke Gummon Stock Netnerlands Telecommunications	transaction					
\$451,000,000  UCAR International  Jaical Public Offering  United Bases  Carbon/Graphice	\$450,000,000 International Paper Convertible Preferred United Success Paper & Forest Products	\$383,592,500  SwissRe Finance Ltd.  Wattanto Switzerland Insurance	\$358,800,000  Diamond Offshore Drilling Initial Public Offering  United Funes Energy	\$321,000,000  JSC Oil  Company LU/Koil  Convertible Bonds  Funda  Energy	\$301,000,000  SGL Carbon*  Common Stock  Common Stock  Carbon/Graphite	\$283,400,000  California Energy Company Common Stock Lighted States Energy	\$255,300,000  Northwest Airlines  Common Stock Linke Status  Transportation			
\$220,000,000  Fletcher Challenge Common Stock Note Zenland Forest Products	\$227,700,000  ASM Lithography Holding NV  Initial Public Offering Netherlands Technology	\$190,400,000  Wolverine Tube  Common Stock  United States  Capital Gnods	\$190,400,000  Tele- Communications  Common Stock  United States  Media	\$181,000,000  SGL Carbon*  Initial Public Offering  Germany  Carbon/Graphite	\$172,500,000  K-III Communications*  Initial Public Offering  I 'nited States  Aledia	\$171,700,000  Banco de A. Edwards  Initial Public Offering  American  Banking	\$166,000,000  Böhler-Uddeholm  Initial Public Offering  Austria  Specialty Steel			
\$163,400,000. Horace Mann Educators Common Stock United States Insurance	\$147,300,000  Genzyme Corporation  Tracking Stock United States  Healthcare	\$132,800,000 American Financial Group Common Stock United States Insurance	\$131,000,000  Houghton Mifflin/INSO Stock Appreciation Linked Securities United States Technology	\$115,000,000  Baby Superstore Convertible Debentures United States Retail	\$111,000,000  Sky City  Common Stock  New Zealand  Gaming	\$106,000,000  Crisplant  Initial Public Offering  Denmark  Capital Guards	\$102,000,000  Leucadia National  Common Stock United States Insurance			
\$98,000,000  Raixma Oy*  Initial Public Offering  Finland  Capital Goods	\$92,500,000  ADVANTA  Stock Appreciation Linked Securies United States Financial Services	\$90,100,000  American Radio Systems Initial Public Offering United States Media	\$90,000,000  Siam Sindhorn  Convertible Bonds  Thailand  Real Estate	\$81,000,000  Comp USA  Common Stock United States  Retail/Technology	\$79,600,000  Baby Superstore  Common Stack United States  Retail	\$76,000,000  Lonrho Finance  Convertible Bonds United Kingdom  Conglomerates	\$75,400,000  Veneor  Cammon Stock  United States  Healthcare			
\$67,000,000 Christiania Bank* Common Stock Norway Banking	\$65,000,000  LG Chemicals Ltd.  Global Depositary Shares  Kotea  Chemicals	\$64,400,000  Easeo  Initial Public Offering  United States  Capital Goods	\$62,100,000  Toy Biz  Initial Public Offering  United States  Consumer Goods	\$60,000,000  Argyle Television  Initial Public Offering Units   Same	\$50,000,000 Samsung Heavy Industries Convertible Bonds Korea Capital Gouds	\$45,000,000 Genzyme Tissue Repair Tracking Stock United States Healthcare	\$45,000,000  Spacehab  Initial Public Offering United States  Aerospace			
\$41,700,000 INSO	\$37,000,000 Repsol*	\$34,600,000 Ostex International	\$32,000.000 Komereni banka	\$28,600,000 Pharmacyclics	\$27,600,000 Commerce Bancorp	\$25,600,000 Alexander & Alexander	\$10,300,000 Saga Communications			

\$1,024,000,000

Rest of World Transfer

Common Stock

Energy

Initial Public Offering

United States

· Healtheare

Common Stock

Czech Republic

Banking

Common Stuck

United States



Initial Public Offering

Healthcare

Common Stuck

United States

CS FIRST BOSTON

Common Stock

United States

Common Stock

United States

Media

#### INTERNATIONAL COMPANIES ANDFINANCE

### Competition and costs take toll on Haeco Thai telecoms

in Hong Kong

Hong Kong Aircraft Engineering Company (Haeco). a listed subsidiary of the Swire group, yesterday announced a sharp fall in profits for 1995 and warned of further difficulties and a fall in margins this year.

Revealing a 20 per cent fall in net profits, from HK\$413.6m to HK\$331.3m (US\$42.9m). Haeco said the "disappointing result" largely reflected competition within the industry and the impact of inflation on its

Haeco has suffered from the rise in capacity in the interna-tional aircraft engineering industry, and from the steady erosion of profit margins. "Global overcapacity in beavy airframe maintenance has continued to have an adverse

impact on market rates," the

Mr Mark Simpson, head of research at ING Barings in Hong Kong, said the results were below expectations and the latest in a series of disappointments from the company. He said the main concern was the fall in operating margins. to about 11 per cent in the second half of the year from about 17 per cent in the comparable period in 1994.

Analysts forecast a further fall in underlying profits this year, although net profits will be boosted by a HK\$156m exceptional item resulting from the formation of a 50-50 joint venture with Rolls-Royce last year. Mr Simpson cited some positive factors which would feed through, including a fall in inflation in Hong Kong and an upturn in aviation

Telekom Malaysia, the

country's largest listed com-

pany, produced revenues and

net profits for 1995 generally in

line with analysts' expecta-

tions. The company, which was partially privatised four years

ago, said it was confident of

The group reported pre-tax profits of M\$1.93hn (US\$758m),

a 15 per cent improvement on

the year hefore. Revenues

came in 17 per cent ahead at M\$5.25bn, while earnings per

share were up 13 per cent at

Mr Mohamed Said Mohamed

Ali, chief executive, said lt bad

been a satisfactory perfor-

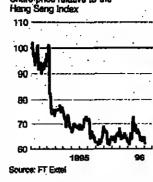
mance despite a year of reor-

ganisation and restructuring.

He said the group intended to

sustaining growth.

Haeco



For the moment, however, the outlook is difficult. "It is likely that margins in all areas of the company's business will continue to suffer," said Haeco. Although falling, inflation would continue to push up the company's cost base and

use its profits in capital expen-

diture to increase telecoms

The group would match or

increase its capital expenditure

to meet its obligation to pro-

vide universal service and to

improve services in rural

Residential line growth, at 16

per cent, was weak in the sec-

ond half of the year compared

with 19.5 per cent in the first

six months. Business line

growth, however, was 17.3 per

cent in the second half com-pared with 16.5 per cent in the

first, so that growth in this sec-

tor exceeded residential line

growth for the first time since

Asian telecoms analyst with

Salomon Brothers, said he

believed the decline in residen-

Southcorp blames higher

interest charges for fall

Andrew Harrington,

areas, he said.

facilities for its customers.

erode profitability, it said. In addition, Haeco said that Cathay Pacific, its biggest customer and another member of the Swire group, was expected to reduce its requirements for heavy airframe maintenance in Hong Kong. This is partly

Telekom Malavsia

Share price relative to the KLSE Composite

because the two-bay hangar a taco, the company's assort Soar despite ate, becomes operational this

ear. Taeco, which is based in Xia Operating men in sonthern China. expected to see strong growtly as a result of its low costs weakness However, the Swire group claims the overall growth il By Ted Bardacke air traffic and maintenand in Banckok requirements in the region w be boosted by the completio of Hong Kong's new airpor Telephone and Telecom, Thai-This is scheduled for Apr land's two private operators of

Laat year's result acbieved on sales ( HK\$2.39hn, down slightly of HK\$2.41bn in 1994. Profits we lifted by a HK\$17m exceptions item resulting from the diposal of its stake in ASTA Ai craft Services. Haeco said total dividend for 1995 is to reduced to HK\$0.80, fro HK\$0.94 in 1994.

Steady growth at Telekom Malaysia in the next few years, a expect the historic trend

re-emerge in 1996." He said that because of h now experiencing diminish returns characterised declining margins, falling re nue per line (masked by residential line growth in 19

profitability would be affect increased competition the government awarded op ator's licences to nine com nies was played down by To kom's general manager corporate finance, Mr R Noorma Raja Othman. He sa "There will not be mu impact this year from comp tion because of rationalisat in the industry.

line growth in the past for years, Telekom Malaysia w

and shrinking waiting lists. Concern that the gron

through the sale of shares in United Communications; TT&T's gain came through the capitalisation of overheads, and by not depreciating existing lines. "We even think TA would have had a loss if it wasn't for the Uoom sale," said one analyst at a foreign brokerage

> operating side is that in spite of an overall shortage of tele-phone lines in Thailand, the companies have saturated traditional markets of high usage with new lines, creating a surplus that is going unused and therefore not generating More than one-third of TA's

The main problem on the

TelecomAsia and Thai

fixed-line telecommunications

services, have reported

substantial profit growth

Full financial details were

not released, hut analysts said

most of the growth came from

non-operating income.

TA, a joint venture between
Thailand's CP Gronp and

Nynex of the US which has a

concession to install and operate 2.6m telephone

lines in the Bangkok area,

reported net profit for 1995 of Bt1.29bn (\$51.2m), more than

double the previous year's

TT&T, a joint venture between Jasmine and Loxley

of Thailand and NTT of Japan

which has a concession to install and operate 1.5m lines in the Thai provinces, reported

net profit for 1995 of Bt830m

a 336 per cent increase over 1994's Bt190m.

Analysts said at least 70 per

cent of the profit of the two

companies came from non-

operating income, in TA's case

for 1995.

installed lines bave no subscribers, while the figure for TT&T is ahove 50 per cent,

analysts say.

This is happening at a time when ongoing installation, and bence capital expenditures, must continue: the companies must keep to a man-dated installation schedule or risk losing favour with the government in what is an extremely politicised business.

Analysts point ont that installation is likely to be completed by the end of 1996. when the companies can turn their focus more towards marketing. In the case of TA, there is

also the potential of addedvalue services delivered through their telephone lines, snch as the recently inangurated cable television service, Universal Cable Tele-

vision. The fixed-line results contrast with the continued high growth of mobile phone services, which reported surprising large profit growth on Monday - mostly on the back of sales in the provinces, **NEWS DIGEST** 

## O'Reilly's S Africa arm advances 45%

Independent Newspaper Holdings, the South African subsidiary of Irish entrepreneur Mr Tony O'Reilly's Independent Newspapers, posted a 45 per cent increase in attributable income to R60.7m (\$15.6m) for calendar 1995, its first full year of trading. Mr Liam Healy, chief executive of Independent Newspapers

in Ireland, said the results "vindicated" the group's decision to take over the former Argus Newspapers group in the run-up to South Africa's first multi-racial elections in 1994.

Earnings per share rose 31 per cent from 92.7 cents to 134.6 cents, and the final dividend was 60 cents. The dividend for the group's first nine months of operation, to December 31

1994, was 20 cents.

The group launched three new titles at a cost of R9m during the period: The Sunday Independent, a broadsheet for the densely populated Gauteng province; and two supplements to existing national publications – Sunday Life magazine and Business Report. Only R1m of the start-up cost was taken last

Operating income before exceptional items was R102.3m, an increase of 41 per cent on turnover 21 per cent higher at R872m. Exceptional costs increased from R2.5m to R9m. because of technological upgrades and joh cuts. These were offset by a rise in margins from 12.3 per cent to 14,3 per cent, despite the sustained fall in newspaper circulation among the group's traditional market of predominantly white readers. Mark Ashurst, Johannesburg

#### Pacific Dunlop court exclusion

Pacific Dunlop, the Melbourne-based conglomerate, said yesterday that a US court had excluded non-US persons from the class action being brought against the company's Telectronics heart pacemaker unit.

The litigation centres on a brand of pacing leads, some of which later developed faults. Pacific Dunlop, which is also facing legal actions in France, Canada and Australia, said the ruling would remove 18,500 potential plaintiffs from the US Nikki Tait, Sydney

Meekatharra to proceed

Meekatharra Minerals, the small Australian exploration company, said it planned to go ahead with development of a gold mine at Way Linggo in southern Sumatra. It said that the project would have a capital cost of US\$15m.

and the mine's project cash operating costs were below \$200 per ounce. It said that, pending regulatory approvals and the securing of financing arrangements, it planned to begin mining in early 1997. Annual production was estimated at up to 35,000 tonnes of gold and 500,000 ounces of silver.

The Meekatharra statement was made in response to a stock exchange query over the recent rise in the company's shares.

#### Orlando Wyndham expansion Pernod-Ricard, the French wines and spirits group, is to

expand production facilities at Its Orlando Wyndham winery in South Australia. According to a South Australian government delegation, which met the company in Paris, a new hottling line is to be installed, and vineyard development

Nikki Taii

#### Toshiba Corp raises forecast

Toshiba Corp's sales of personal computers worldwide will exceed Y400bn (\$3,8bn) in the business year to end-March 1996, much more than the company's previous forecast of Y363bn. the company said yesterday.

"The yen's stabilisation has provided a better exchange rate advantage than budgeted," it said. This is important because most of Toshiba's PC sales are overseas, it noted.

#### Honda Motor in Vietnam

Honda Motor is awaiting final approval for a project which would see the Japanese company's motorcycles produced for the first time in Vietnam. A licence for the project – a joint venture plant 30 per cent owned by Vietnam's Agricultural snbsldiary, Asian Honda Motor - may be granted within

The plant, to be located in Vinh Phu province north-west of Hanoi, is capitalised at \$30m, and production could start within two years with initial output of of 300,000 motorcycles a year, rising to around 450,000 by 2005.

Small-engine motorcycles are fast replacing bicycles as the main means of transport in Vietnam's cities. In mid-1995 there were 2.7m registered motorcycles in Vietnam, a country of 74m people. Vietnam expects to import a further 2.35m before the end of the century, according to official figures.

Meanwhile, Malaysia Holdings has signed an agreement to manufacture and distribute electric scooters in Asia for France's Peugeot group. The company currently assembles and distributes Peugeot cars in Malaysia.

Reuter, Hanoi and Kuala Lumpur

#### Sales climb to \$760m at **De Beers**

By Mark Ashurst

De Beers, the South African diamonds group basking in the wake of last week's pact with the Russian government to preserve its dominance of world diamond supply, yesterday posted a 21 per cent increase in income from diamond sales in calendar 1995, to

Combined attributable earnings for De Beers Consolidated Mines and De Beers Centenary rose 11 per cent from \$560m to \$624m. Equity-accounted earnings were up 18 per cent to \$986m as retained earnings from associates rose 33 per

Combined final dividends increased 15 per cent to 67.4 cents per De Beers/Centenary linked unit, which boosted the year's dividend to 92.9 cents from \$4.4 cents.

Analysts welcomed the terms of the deal with the Rus-sian government, which guarantees exclusivity for De Beers to buy 95 per cent of Russian diamonds for export and distrihution through the group's London-based Central Selling Organisation. -

Net diamond stocks were \$4.7m against \$4.4m, with stockpiles at the South African Venetia mine 43 per cent higber at R1.6bn (\$410.3m) compared with R1.2bn.

income from investments, notably Anglo American and its industrial arm, Amic, was \$223m against \$196m.

Although noo-diamond interests comprised 58.6 per cent, or R38.5bn, Beers has traded at a discount of 28.7 per cent to net asset value.

By Nikki Tait Southcorp, the former SA

Brewing group which takes in packaging, appliance manufac-turing and wine interests, yesterday announced a 14.2 per cent drop in after-tax profits in the six months to end-December, to A\$52.4m (US\$39.8m). In the same period a year ago it made A\$61m.

The company said sales increased from A\$1.17bn to A\$1.32bn, while operating profit before tax and abnormal items was 11.2 per cent lower,

partly on bigber interest bopeful of a profitable June cents lower at A\$3.27.

charges. These almost doubled to A\$30.1m as Southcorp acquired Hoover Australia from Maytag of the US and also the Smorgen PET plastic bottle operations.

On a divisional basis, Southing market.

corp said that pre-interest earnings from the appliance business were down 52.6 per cent to A\$14.6m. The result was below expectations, and the company said sales volumes had been hit by the downturn in Australia's hous-The US water beater group,

meanwhile, remained in the at A\$92.1m. red, but with losses reduced, the year. nue 11.7 per cent about the downturn was blamed and Southcorp said it was The group's sbares ended 4 son and Horton said.

quarter. On the packaging

producers. The wine division remained the most buoyant part of the business, with pre-interest earnings rising almost 25 per cent to A\$47.6m. In the UK. sales were up 20 per cent, and in the US, by 75 per cent. The company said it was looking for an international wine acquisition before the end of

front, pre-interest profits rose 11.2 per cent, in line with expectations.
Rural sector demand rose, although a cool summer affected sales to the beverage

tial line growth in the latter

part of the year was an aberra-tion. "We do not believe that

#### up 25% at nine months New Zealand publisher Wil

NZ publishe

and Horton, which yester announced nine-month af tax profits of NZ\$35.6 (US\$24m), said tight busin conditions had hurt volume all sectors of the media, Rereports from Wellington.

The company said the re-represented a 25 per c increase in earnings bee interest and tax. "Notwithstanding the d

cult conditions...the N Zealand Herald traded strong with total advertising volum 5.7 per cent ahead of last yes corresponding period and r nue 11.7 per cent ahead," The demand for coll

advertising had been strd and extra colour and insert facilities would be instal during the current year. Wilson and Horton said publishing market remail

competitive, hut its two wee magazines had produced s factory profit results. Last month it announced that Mr Phillip

tace, former Avis finance ditor for Australasia, was join the publisher as chief finant

MERCURY OFFSHO STERLING TRUST SICAV

NOTICE OF EAGRDINARY GENERAL MEETING SHAREHOLDERS

The Extraordinary General Mig of Shareholders of Mercury Offshore Sterling Trust ("the Companyheld on 15th February 1896 not having reached the quorum of pred required by law and the Articles of Association, a further Extraolary General Meeting will be held at 6D, route de Trèves, L-2633 Senniberg, Luxembourg at 11.00 am on 20th March 1996,

The resolutions on the Agent the Extraordinary General Meeting of Shareholders may be passed a majority of 7S per cent. of the votes cast therein at the meeting. It will be no quorum requirement for the

the holders of Bester Si must deposit their shares not later than 15th March 1996 is with the Administrator of the Company, or with any or financial institution acceptable the Company, and the two Deposit Recepts (which may be obtained from the Administrator of the Company) must be forware to the Administrator of Company to arrive not later than 18 March 1996. The Sharo deposited will remain blocked until day after the meeting of adjournment thereof;

Sharabelders who carettend the meeting in person are

Information for Shareholders
Shareholders are advised that at subject to smeadment, of the proposed new Articles is available for insion at the following places and at the

To amend the Articles of Auston to permit the change of the Company's registered officSenainserborn

Amend Article 28(7) of thicles of Association to replace the name S.G. Way Group pic with Mercury Asset Managemenous pic.

where fixed lines are still in shortage.

## FORWARD TRUST LIMITED

**NEW INTEREST RATES** FOR DEPOSIT ACCOUNTS With effect from 6 April 1996.

Natice Period	Net Interest % p.a.	Gross Interest % p.a.	Gross Interest (CAR) % p.a.
7 days	3.60	4.50	4.55
1 months	3.72	4.65	4.70
3 months	3.84	4.80	4.86
6 months	3.96	4.95	5.01
12 months	4.08	5.10	5.16

interest on the above accounts is paid or credited twice yearly. Interest rates are subject to variation.



Full information about Notice Accounts is available from: Forward Trust Limited, Deposits Department, 12 Celthorpe Road, Birmingham B15 1OZ, Telephone 0121 455 3417.



readers in France. Our link with the French business newspaper, Les Echos, gives you a unique recruitment advertising opportunity to capitalise on the FT's European readership and to target the French business world. For information on rates and further details please telephone: Toby Finden-Croits on +44 171 873 3456

The Board of Directors

to the holders of the outstanding

US\$ 200,000,000 101/2 per cent Guaranteed Bonds due 2000 of

State Development Institute (incorporated with limited liability under the laws of the Republic of Hungary)

Unconditionally and irrovocably guaranteed as to payment of principal and interest by Republic of Hungary Guaranteed as to payment of principal only and only at maturity

on 31st August, 2000 by International Bank for Reconstruction

and Development

Nance is hereby given that, pursuant to the provisions of the Trust Deed dated 31st August, 1990 (the \*Trust Deed\*) made between State Development Institute (the «Issuer»), Republic of Hungary (»Hungary»), International Bank for Reconstruction and Development (the «World Bank») and The Law Debenture Trust Corporation p.l.c (the «Trustee») constituting the outstanding US\$ 200,000,000 10 1/2 per cent. Guaranteed Bonds due 2000 lithe «Bonds») of the Issuer, the Trustee has agreed with the Issuer, Hungary and the World Bank to the substitution of Hungarian State Treasury (the «Substitute Issuer») in place of the Issuer as principal debtor in respect of the Bonds. Accordingly, with effect on and from 29th February, 1996, all obligations of the Issuer under the Sonds (including in respect of accrued interest), the interest coupons appertaining thereto (the "Coupons") and the Trust Deed have become the obligations of the Substitute Issuer

The guarantees given by Hungary and the World Bank remain in effect

No new definitive Bonds or Coupons will be issued and existing Bonds and Coupons will remain valid

Copies of the First Supplemental Trust Deed dated 29th February, 1996 made between the issuer, the Substitute Issuer, Hungary, the World Bank and the Trustee and of the First Supplemental Agency Agreement dated 29th February, 1996 made between the Issuer, the Substitute issuer, Hungary, the Trustee and the Agents referred to below, in each case giving effect to the substitution are available for inspection during normal business hours by the holders of Bonds and Coupons at the offices of the Agents referred to below.

> **Principal Paying Agent** Kredietbank S.A. Luxembourgeoise 43 boulevard Royal, L-2955 Luxembourg Other Paying Agents

Kredietbank N.V., London Branch Kredietbank N.V 7th Floor, Exchange House 7 rue d'Arenberg B-1000 Brussel London EC2A 2HQ, England

> Kredietbank S.A. Luxembourgeoise 43 boulevard Royal, L-2955 Luxembourg

> > Transfer Agents

Kredietbank N.V. 9-1000 Brussels Belgium

Kredietbank N.V. Kredietbank N.V. London Branch New York Branch 125, West 55th Street 7th Floor Exchange House 10th Floor Nevv York, N.Y. 10019 London EC2A 2HQ U.S.A. England

NOTICE TO HOLDERS OF WARRANTS TATA ENGINEERING AND LOCOMOTIVE COMPANY LTD ("TELCO") Notice is hereby given that as of February 28, 1996 the Directors of the have amended the Warraut Agreement between the Company and Citibank S.A. as follows:

AMENDMENT NO. 1 TO WARRANT AGREEMENT THIS AMENDMENT NO. 1 TO WARRANT AGREEMENT like "Arr

Unless the context otherwise requires, capitalized terms used in this Ameni

WHEREAS, the parties hereto agree to enter into this Amendment, which is

At the close of banking business in London, England on the Expiration Date any Warrants which have not been exercised by the Warrantholder thereof will lapse and cease to be valid for any purpose, provided that such warrants will be treated as having been exercised by a Company Designee has defined below! if and to the extent that the Designee Exercise Conditions have been

Warrant Acen to writing of the designation of any Company Designeeds). To exercise any such Warrants the Company Designee must, before the close of banking in London, England on March 8, 1996, fulfill the following conditions (the "Designee Exercise

this in determining whether the exercise Conditions or Designee Escreise Conditions have been met in respect of any Exercise Notice or Besignee Escreise Notice, as applicable, the Warrant Agent shall first consider all Exercise Notices and give effect to such duly delivered Exercise Notices prior to considering and giving effect to any duly

lafter deduction of any applicable remittance charges and without interest thereon).

Section 3: Except for the terms and conditions of the Warrant Agreement expressly amended or supplemented berein, none of the other terms and conditions of the Warrant Acreement are ununded to be amended and salcol the terms and conditions of the Warrant Agreement, as amended and

TATA ENGINEERING AND LOCOMOTIVE COMPANY LIMITED 7.142,258 Warrants to Purchase 7.142,858 Ordinary Shares (par value Rs. 10 per share)

dated as of February 2s, 1996 between Tata Engineering and Locomotive Company Limited, a public company incorporated in the Republic of India with limited hability the "Company" and Cribinak Liazembourg S.A. as warrant agent, registers and transfer agent (the "Warrant Agent", "Registrar" and "Transfer Agent" which expressions shall include any additional warrant agents, negistrars or transfer agents) appointed by the Company to act in such respective capacities, amends and supplements the Warrant Agreement, dated as of July 15, 1984, between the Company and the Warrant Agent (the

without definition shall have the respective meanings specified in the Warrant Agreement.

WHEREAS, the Company desires to amend the Warrant Agreement to provide that
any Warrants issued pursuant to the Warrant Agreement which have not been exercised by
the Warrantholder thereof on the Espiration Date may be exercised by a designee of the
Company pursuant in a Designee Exercise Notice (as defined below) delivered to the

receivary to effectuate the desires of the Company expressed in the preceeding recital; and WHEREAS, the parties agree that the Amendment does not materially adversely affect the rights and interests of the Holders or Beneficial Owners as of the date hereof

NOW THEREFORE, in accordance with Section 18 of the Warrant Agreement, each the agreement and supplement the Warrant Agreement as follows:

The last sentence of Section 4.2 shall be deleted in its entirety and replaced

satisfied on or before the Expiration Date.

The following shall be inserted at the end of Section 4.2: 18) The Company may at any turne grant one or more persons (each a "Company Designee") the right to exercise any or all Warrants which have not been exercised by the Warrantholder thereof on or before the Expiration Date. The Company will notify the

immediately available funds to the Principal London Office or the Principal urg Office for credit to the account specified in the Designee Exercise Notice (as elow), such payment to be made free of any foreign exchange commissions, e charges or other deductions.

in deliver at a specified office of the Warrant Agent ontside the United States and India a nonce of extrase in respect thereof the "Designer Exercise Notice": substantially in the form of Exhibit X attached hereto duly completed and signed by or on behalf of the Company Designer; and (ai) the Exercise Conditions set forth in Section 4.4 (iii), (iv), (v) and (vi).

(c) To the extent that, after determining the number (if any) of Warrants which shall be iteated as having been exercised by a Company Designee, the Warrant Agent determined that any excess funds have been submitted by or on behalf of such Company Designee, the Warrant Agent shall senim such funds to the person remitting the same

supplemental herein, shall continue in full force and effect.

ADMINISTRATOR: Mercury Asset Manager 6D, route de Trèves, L-2633 Senningerberg,

PAYING AGENTS:

Luxembourg S.A., 69 route d'Esch, L-1470 LUXEMBOURG

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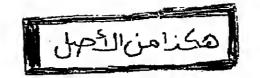
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**Les Echos** 

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Market Control of the Control of the



#### INTERNATIONAL COMPANIES AND FINANCE

## WR Grace snubs Hercules merger approach By Tony Jackson in New York

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William St.

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Mark Assessment Comments

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MARINE MANAGEMENT OF THE PARTY OF THE PARTY

WINDS MARCHE

Manager Andrews Andrew

The rise of \$7% a share to \$76% valued : Grace at \$7.4bm. Mr Thomas Gossage, chairman of Hercules, resigned from the Grace board on Monday, saying he had put a merger proposal to Grace's chairman, Mr Albert Costallo, after being prompted by several large shareholders in both companies. Grace said its direc-

Shares in W.R. Grace, the embattled US

chemicals company, jumped 11 per cent

yesterday on news that it had rejected a

low US speciality chemicals producer.

Costello said "it is not the right time, and Hercules is not the right company". Hercules would not comment on market speculation that it might launch a merger could provide "tremendous merger approach from Hercules, a felhostile bid, beyond saying it was con-sidering various options. Its market value of \$6.9bn is roughly the same as strategic overlaps, we would not have Grace's, and it has little debt after a

recent series of disposals. Hercules said its offer was not intended to block Grace's agreed merger of its medical division with Fresenius of Germany, announced a month ago. That deal also drew opposition, in the form of a rival \$3.8bn offer for the

said now that Grace was about to become a pure chemical company, a opportunities". Mr Costello denied there were synergies, saying: "If there were

put Tom Gossage on the board in the

first place. profits of \$368m on sales of \$2.4bn. Grace's chemicals business - excluding healthcare - had operating profits of \$387m on sales of \$3.7bn. Grace's products range from plastic packaging to catalysts and sealants. Hercules

130 -

In a letter to Mr Costello, Mr Gossage paper, food, fibres and electronics. The Hercules approach is the latest in

a series of corporate upheavals at Grace, which has been in turmoil since the ouster a year ago of its chief executive officer, Mr J.P. Bolduc. This led to a shareholder revolt, the resignation of most of the board and the appointment of Mr Costello, a former head of the US Last year, Hercules had operating chemicals company American Cyanamid.

Wall Street analysts suggested yesterday that a number of international chemicals groups besides Hercules could be interested in buying Grace which is one of the biggest speciality makes chemicals for such industries as chemicals manufacturers in the world.

Concerns about WordPerfect

include the high proportion of

users who still use the old Dos

operating system and are not

expected to upgrade to Win-

dows or Windows 95 soon.

They also worry that Microsoft

might try to outflank Corel by

bringing out a graphics prod-

Mr Cowpland dismisses these

fears. He predicts that with

proper marketing, software

users will better appreciate

WordPerfect's superior fea-

tures - for example, the one-

tenth point increments in its

font sizes, versus Microsoft's

will be more than a word pro-

cessing programme. Starting

with WordPerfect 7, extras are

likely to be added to the tradi-

tional word processing pack-

age, such as a Netscape Inter-

net browser, and various

multimedia and graphics prod-

ncts. PerfectOffice may include

Novell's electronic publishing

and workgroup-sharing soft-

As for the danger of Micro-

soft entering the graphics mar-

ket, Mr Cowpland says that

'they'd have to buy a product

that we've already demolished

in the market place". In any

case, he expects any foray by

be delayed at least six months

Even sceptical outsiders tem-

ware.

The new Corel WordPerfect

one-half point increments.

nct to take on CorelDraw.

### **Cemex** plans big acquisition in Asia

By Daniel Dombey in Mexico City

Cemex, the Mexican company which is the fourth-largest cement concern in the world, plans a big acquisition in Asia within the next two years, according to Mr Gustavo Caballero, the company's chief financial officer.

Cemex already operates in Spain, Venezuela and the US, and saw improved operating margins in all three countries in 1995. According to results announced last week, 63 per cent of sales came from outside Mexico, allowing the com-pany to increase cash flow 14 per cent in peso terms to 6.3bn pesos (\$822m) despite the Mexican recession.
"Most of our peers [in the

cement industry] work in mature markets. We are rather the opposite," Mr Caballero said. Cemex boped to increase its presence in emerging markets, be added, to balance the higher volatility of such countries. "Asia would be a good balance for

our existing operations."

Cemex already has a sales presence in Asia, and has had an office in the region for some years. Sales in Asia made up 48 per cent of Cemex's Mexico operations' exports of 859m pesos in 1995.

"Cemex always starts exporting cement, then it opens distribution terminals and finally it makes an acquisttion or starts an associa-tion," said Mr Roberto Carrillo, Latin American cement strategist at ING Barings in Mexico City.

Mr Caballero said a further acquisition could be financed by securitising a revenue stream or with a part-equity purchase. Though debt cove-Microsoft on to Core's turf to nants prevent Cemex going beyond 55 per cent leverage, Mr Caballero said that the level of \$1.5 per cent reported for the end of 1995 left some room for manoeuvre.

"Our debt situation was very good before the Mexican crisis," he said. "But once that took place, even though we are still sound, we are now near the limit, not to meet obliga-Bernard Simon | tions, but to grow."

#### AMERICAS NEWS DIGEST

## **Auction revival** boosts Sotheby's

Sotheby's Holdings, the auctioneer, financial services and real estate group, announced a continued recovery in revenues and earnings in 1995. It said auction sales were \$1.67bn, the highest since 1990, and the fourth-best in the group's history. Revenues for the year rose 20 per cent, from \$260m to \$313m, and net income by 61 per cent, from \$20.3m to \$32.6m. Earnings per share increased from 36 cents to 58 cents.

In the fourth quarter, which yielded the bulk of the group's profits, net income rose from \$17.8m to \$27.5m, and earnings per share from 31 cents to 48 cents. The rise in auction sales was led by a near doubling in sales of impressionist and modern art - to \$176m - and a 38 per cent gain in sales of jewellery to \$70m. Three large sales of private collections contributed \$174m.

Revenues from auctions fell as a percentage of auction sales, from 17.6 to 17.1 per cent over the year, Sotheby's said this reflected a change in mix to higher average lot values, and the competitive pricing pressures in the market.

The new schedule of seller's commissions, announced last September, has yet to have a significant effect. Analysts said this should begin to have an impact in the first half of the current year. However, they said the lack of large private collection sales could make comparisons with last year difficult. Sotheby's is due to auction \$5m worth of art and objects owned by Mrs Jacqueline Kennedy Onassis in April. Maggie Urry, New York

#### Tortilla switch lifts Maseca

Grupo Industrial Maseca, the food company which dominates Mexico's cornflour market, announced a 5.3 per cent rise in 1995 sales to 3.4bn pesos (\$449m). Volumes were up 17 per cent on the year before. The company's strong cash position of 925m pesos at the end of 1995 belped it mark up a 34 per cent

increase in net profits to 464m pesos for the year.

Maseca has benefited from the country's continuing switch to tortillas made from cornflour rather than ground maize. Maseca claims 70 per cent of the cornflour market, which in turn accounts for 44 per cent of all tortillas.

"Tortillas are far more important than bread in Europe or rice in Asia," said Mr Javier Velez, head of corporate finance. "The demand does not fluctuate with the economic situation." Despite a fall in real prices, operating profits increased 23 per cent to 557m pesos.

The company said it had reduced expenditure on advertising and cut administrative costs, while the opening of three new plants and modernisation of Mexico City operations helped reduce freight expenses. Daniel Dombey, Mexico City

#### Operating profit falls at ICA

Empresas ICA, Mexico's largest construction company, reported a fall in operating income to 246m pesos (\$32.5m) for the fourth quarter last year, compared with 454m pesos for the same period a year before. Net loss for the quarter, in which interest rates rose, stood at 130m pesos compared with a loss of 624m pesos in the quarter last year.

#### Loblaw plans stock split in May

Loblaw, Canada's biggest food distributor, which is owned by the Weston family, plans a three-for-one stock split in mid-May, bringing total shares outstanding to 240m and broadening the market in the company's shares. Loblaw is also raising C\$300m (US\$219m) with a medium term note issue to fund modernisation and expansion. The market values Loblaw at nearly C\$3bn. The company earned C\$146.7m in 1995, 17 per cent up on 1994. Robert Gibbens, Montreal

### division from US healthcare group Bax-ter International, since withdrawn. tors had voted against the offer. Mr Corel confident of a perfect repackaging

enior executives of Corel, the Canadian software maker, were at Word-Perfect's offices in Orem, Utah, last Friday for a burst of corporate cheerleading to welcome the word-processing software group into the Corel fold. Corel, which bought Word-

Perfect in January from Novell, the networking software specialist, is eager to show WordPerfect's 600 employees, as well as sceptical outsiders, that the deal has the makings of an exciting and rewarding partnership.

Over the next few weeks, each WordPerfect employee will be linked to head office in Ottawa by Corel's new video communication system, which includes a small camera mounted on every PC monitor.

Nor is Corel is wasting any time applying its vaunted marketing skills. A renamed and repackaged Corel WordPerfect is to be launched within the next few weeks. "It's going to be supported by megabucks of advertising," promises Mr Michael Cowpland, Corel's founder and chief executive. More ambitious co-operative ventures are in store later in the year. Corel's efforts underscore

the high stakes riding on its new acquisition, both for WordPerfect and itself. The Canadian company needs WordPerfect to help broaden its base. Its flagship product, the popular CorelDraw graphics software, made up 74 per promoting [WordPerfect] cent of sales, totalling strongly in the past 18 US\$196.4m in the fiscal year to months. Its Windows 95 ver November 30.

unturned in perfecting and months behind the comparable marketing CorelDraw in the Microsoft Word product.



Words and pictures: Corel is aiming to broaden its product base

six years since it was launched. "The only things left for them were acquisitions or new products," says Mr Tom Astle, analyst at Midland Walwyn in Toronto.

For WordPerfect, the arrival of a new parent offers hope of rejuvenation. WordPerfect remains one of the most popular word-processing programs, but has steadily lost ground in recent years, notably to Microsoft Word. Its business version, PerfectOffice, has market share of only about 5 per cent, versus more than 90 per cent for Microsoft Office.

Novell bought WordPerfect two years ago for \$1.4bn, but received only \$116m - all in shares - from Corel. This made it Corel's biggest shareholder, with a 16 per cent fully-diluted stake. According to Mr Cow-pland, Novell "really wasn't sion, known as WordPerfect 7, Corel has left few stones is due for launch in April, six

Corel appears to be better placed than Novell to revive WordPerfect, "There's a much better culture fit with the folks at Corel than there ever was at Novell," says one WordPerfect employee. While Novell's customers mainly comprise staid information technology specialists and engineers. Corel is driven by the pizazz of the

r Cowpland, a fasttalking Englishman with a collegiate management style, first came to prominence the 1970s as cofounder of Mitel, the telephone equipment maker. His lifestyle is epitomised by a convertible Porsche with the registration COREL

Advertising ontlay made up 28 per cent of Corel's 1995 sales. While revenues rose 19.5 per cent, advertising spend shot up 72.8 per cent to \$55.1m. Mr Cowpland says this year's advertising budget will top \$100m. The company spends heavily on sports sponsorship. Concern about Corel's pros-

1995 Source: FT Exter pects has grown recently. Disappointing shipments of a new CorelDraw version designed for Windows 95 pushed the company to a \$1m loss in the final quarter of fiscal 1995, compared with earnings of \$11.2m a year earlier. The

Share price relative to the

peak of C\$26.62, quarter revenues this year were only about \$50m. "If they get \$150m from WordPerfect this year, they'll be lucky,' says one analyst, who has told

Office are pushed into the dis-tribution pipeline.

#### WordPerfect and Perfect-Office sales were US\$400m in Novell's latest fiscal year, ended October 31. But first-

WordPerfect purchase bas

failed to revive Corel's share

price, which has slipped to

C\$14.25 on the Toronto stock

exchange, from last year's

by US antitrust scrutiny. clients to steer clear of Corel. Stronger results are likely per their concerns with respect for Corel's marketing flair and over the next few months. But yonthful energy. "There is great leverage [in the WordPer-fect deal]," Mr Astle says. analysts caution against reading too much into the performance. Earnings are likely to be buoyed as the new versions "They could make us all look of WordPerfect and Perfect-

#### **ABN·AMRO**

ABN AMRO BANK N.V.

in accordance with the terms

for the interest, period from February 26, 1996 to August 27, 1996 the Rate of Interest has been fixed at 5.25 per cent, and that the interest payable on the relevant Payment Date, August 27, 1996 against Coupon No. 8 in respect of USS 5,000 nominal of the Notes will be US\$ 133.44 and in respect of US\$ 100,000 nominal of tha Notes will be US\$ 2,668.75.



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## Philips Electronics N.V.

Notice convening the ORDINARY GENERAL MEETING OF SHAREHOLDERS

to be held on Monday, March 25, 1996, at 2 p.m., in the BEURS-GEBOUW EINDHOVEN, LARDINOISSTRAAT 8 (at the north side of the central railway station), EINDHOVEN. :

The items on the agenda are as follows:

1. Opening.

2. Financial statements and Annual Report 1995. - Report on the activities of the Philips group in 1995. . .

Report of the Supervisory Board on the financial statements for 1995. Adoption of the 1995 financial statements. Adoption of dividend proposal.

Composition of the Board of Management.

4. Composition of the Supervisory Board.

5. Designation of the Board of Management as the body authorised for a period of 18 months to issue shares or rights to shares and to restrict or exclude the pre-emption right.

6. Authorisation of the Board of Management for a period of 18 months to acquire shares in the Company.

7. Any other business.

8. Closing.

The complete agenda and the Annual Report Philips 1995 have been deposited for inspection and are available free of charge at the office of the Company (Philips Finance Securities, Building VOp, P.O. Box 218, 5600 MD Eindhoven), and at the head offices of the banks listed below.

trisofar as this is laid down in the Articles of Association, the proposals for nominations, together with information relating to the persons proposed, have been deposited for inspection and are available free of charge at the office of the Company (Philips Finance Securities) and at ABN AMRO Bank N.V. Herengracht 595, in Amsterdam.

Holders of shares Philips Electronics to bearer (in CF form) listed on the London Stock Exchange who wish to attend the meeting, either in person or by proxy, should order their own depositary bank not later than 12.00 hours at noon on March 21, 1996 to block such certificates in exchange for a receipt. from their bank that will entitle the holder to admittance to the meeting. Depositary agents must notify the Company not later than March 21, 1996.

Banks appointed as coordinating agents between depositaries and the Company:

in the United Kingdom: Hill Samuel Bank Limited, 10 Fleet Place, London.

in the Netherlands: ABN AMRO Bank N.V., Herengracht 595, Amsterdam.

Eindhoven, March 6, 1996

The Board of Management



Rectification

US Dollars 150,000,000 Subordinated Floating **Rate Notes** 

and conditions of the Notes, notice is hereby given that

A8N AMRO BANK N.V.



Correction Notice BankAmerica Corporation **BankAmerica** US \$500,000,000 **Floating Rate Notes** Due February 1997 For the period from February 26, 1996 in May 28, 1996 the Notes will earry an innerest rate of 5.6875% per annum with an interest amount of US \$75.74 per US \$50,000 principal amount of Notes payable on May 28, 1996. Union Bank of Switzerland London Branch Agent 8.mk

The Top **Opportunities** Section For senior management positions. For information call: Will Thomas

+44 0171 873 3779

## Emap close to £145m French magazines deal

By Christopher Price

Emap, the publishing and media group, is close to purchasing three leading French consumer magazines from Compagnie Luxembourgeoise de

Telediffusion for £145m (\$223.3m). The deal would provide the highlyacquisitive Emap with some of France's top-selling titles, such as Top

with a circulation of 700,000, and Tele Star, a television listing magazine with weekly sales of 2m. Annual revenues of the husiness last year were

Emap is understood to have beaten off stiff competition from Springer Verlach of Germany to secure the deal which will increase by more than

a half Emap's revenues from its French operations and raise its market share of the country's consumer magazine market from 11 per cent to

Emap entered France in 1990 but made its higgest move in June 1994, spending FFr710m in the purchase of on Editions Mondiales, a Paris-based publisher. Three other smaller acqui-

sitions, totalling FFr205m, accompan- cash flow taken into account, analysts ied that deal, including France's higgest selling motoring magazine, L'Auto Journal

It is thought that the UK group will pay for its latest purchase from existing resources. Borrowings stood at £224m at the interim stage in November, a rise of 74 per cent over the previous period. With the group's

are forecasting borrowings of £336m should the deal go through, against shareholders' funds of £152m in the year to March 31, 1995.

As well as Tele Star and Top Sante, the latest acquisition would give Emap control of Tele Star Jeux, a puzzle magazine which has a monthly circulation of 215,000.

## More wagons for Eurotunnel

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Channel tunnel car and freight "shuttle" services, yesterday placed an order for 72 additional freight shuttle wagons costing FFr106m from the French manufacturer, Arhel. for delivery in March-April 1998, writes Charles Batchelor.

n Leisure

Perpetual UK Small. River Plate

a further 144 wagons for delivery in January and December 1999 and announced plans to order up to nine more locomotives and six more club cars for carrying truck drivers. The additional shuttle wagons will hoost Eurotunnel's

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a day by 7 per cent. It said it had sufficient capacity to meet foreseeable demand although traffic figures for Fehruary published yesterday showed further strong growth. The new wagons will be of a

simpler design than the origi-

6.75

Italy, and will cost just one third of the price.

Arhel makes automotive parts and freight railway rolling stock. The wagons will be built Arbel Fauvet Rail at its factory in Douai, northern

Total last year

## M&S makes Canadian sale

Consumer Industries Editor

Marks and Spencer is to sell its chain of 85 D'Allaird's stores in Canada, marking a further attempt by the UK retailer to find a profitable strategy in the

The purchaser is Comark, one of the largest speciality retailers in Canada with more than 500 stores under names such as Bootlegger, Irene Hill and Ricki's. Comark is owned

hy the publicity-shy Brennink-meyer family.

Disposal of the D'Allaird's chain, acquired in the 1970s, will cost M&S about £15m, the group said, of which £10m, will be goodwill previously written off to reserves.

M&S has spent more than 20 years trying to make various formats work in Canada, the first foreign country it tried to hreak into. Its initial attempt to rationalise the operations came in 1992 when it sold the

Peoples Stores chain. "It would have been difficult to get it more wrong," Sir Rich-ard Greenhury, M&S's chairman, said of Canada last year when he was unveiling a further expansion of its successful

The formula that works best for M&S is to concentrate on stores with the same name and essentially the same lay-out and range of goods with which lt has flourished in the UK. This will now he the sole thrust of its Canadian operations.

M&S encountered similar problems in the US as Canada, where it spent heavily to huy the Brooks Brothers clothing chain in 1987 and to rehuild lt hefore finally returning it to profit.

lts purchase of the Kings supermarket chain in New Jersey was successful more onickly.

Continental Europe appears to be one of the overseas areas with the highest interest to M&S. It recently secured the lease on its first German store and plans others in the Ruhr.

The real test in each country, however, is MS's ability to generate sufficient momentum to switch from high-priced niche retailing to the mass market

It did that in France in 1994 cutting prices by some 15 per cent. Profits dipped in the short term, but the group is now exploiting the lower pric-ing to build volume.

## **Future of** Trafalgar portfolio uncertain

By Simon London, Property Correspondent

Uncertainty surrounds the future of Trafalgar House's £200m (\$308m) commercial property portfolio following Monday's agreed £904m hid for the company by Kvaerner. The Norwegian company has indicated that it is likely to sell the portfolio, cutting the

remaining links with Trafalgar's origins as a property company in the 1960s. However, it is not clear whether the portfolio will be hroken np or sold in one hlock. Property agents said the mix of investment and devel-

opment sites was unlikely to appeal to a single investor. Although Trafalgar's property interests have dwindled, the company owns strategic sites including the Baltic Exchange in the City of London. where it has planning permission for a 350,000 sq ft

office development. The site is one of the few City development sites capable of accommodating a very large huilding of the type favoured by investment banks. If a tenant can be found there would be strong competition from UK and overseas investment insti-

Other large development sites include Paddington Basin, where there is potential for a large office complex close to the central London terminal of the Heathrow Express rail link, and at Chiswick, west London.

The 33-acre Chiswick site, with planning permission for an office park, is held in a joint venture with British Land. They are already looking for a huyer. Most of Trafalgar's invest-

ment properties are held in a joint venture formed in 1990 with Chartwell Land, the property arm of Kingfisher, the retail group.
Ontside Marston Honse,

Trafalgar owns a handful of larger investment properties such as the UK headquarters in Surrey of Sony, the Japanese electronics group.
The Sony huilding is rela-

tively new and generates annual rental income of about £4m. The larger hnildings would attract strong hidding from UK investment institutions if they were for sale. • Two Kvaerner shareholders

have requested an extraordinary meeting to vote on the group's acquisition of Trafalgar House, writes Christopher Brown-Humes in Stockholm. Under Norwegian law, onb-

lic companies have to call an EGM if shareholders accounting for 10 per cent of their capital demand one. Kvaerner said the hid was "absolutely hreversible".

#### LEX COMMENT

## UK housing

The UK's Labour party may have suddenly become the self-proclaimed "party of pri-vate housing", but Mr Tony Blair, its leader, seems short of new ideas to demonstrate this commitment. He made a hlistering attack on the government's cuts in mortgage tax relief to homeowners yesterday, without suggest-ing he would reverse them. Meanwhile, his proposals for more flexible mortgages and loans for homeowners with negative equity - where the property is worth less than the loan - are hardly revolu-

Annual % chance

mills sla

tionary. These are already offered by a raft of lenders. The only controversial element of his keynote speech was the proposal that mortgage lenders, like life assurance companies, become legally required to give "best advice".

Certainly, the draft code of lending practice by the Council of Mortgage Lenders does not go far enough – it does not provide automatic disclosure of commission or penalties for had advice. But Mr Blair would do better to force the council to toughen the code rather than resort to legislation.

At least Mr Blair's statements will provide some comfort for

the two-thirds of UK families who own their own homes. But property owners would gain greater benefit if the party regained its tag as the party of inflation, thereby fuelling a recovery in the housing market. After all, lower interest rates and tax cuts should help raise housing prices by some 2 per cent this year, but that hardly scratches the surface of recent

# Beers calms Aus

## **BET** chief could receive £5m

Mr John Clark, chief executive of BET, will receive more than £5m (\$7.7m) if the £1.9hn hostile hid for the husiness services

group hy Rentokil is successful.

The figure, which includes a payment of about £3m from a controversial medium-term incentive scheme, provoked outrage from some BET institutional investors. One institution described the pay-off, one of the biggest to a

director in UK corporate history, as a "disgrace".

The shareholders were angry that the money in the scheme is paid to directors if there is a successful takeover regardless of whether the relevant performance criteria have been met. According to BET's 1995 annual report, a sum of £3.35m has been set aside for the executive directors who qualify for the scheme - Mr Clark and Mr Keith Payne, finance director. It is understood that Mr Clark qualifies for about £3m of that.

Mr Clark, who was paid a total of £1.1m last year including bonuses and pension payments, also stands to make a profit of £1.07m on his share options at the 200% Rentokil cash and share offer. He is also understood to be on a three-year rolling contract with the group, with an annual salary of about

The incentive scheme was introduced in 1993 and covers about 50 senior managers at the group.

Some institutional shareholders supported Mr Clark. One said: "You have to be flexible. The company was nearly hust when he took over and not many people were queneing up to

Geoff Dyer and William Lewis

L EXCHANGE

#### Welsh Water A\$30m investment Welsh Water has made its first significant infrastructure

investment overseas, paying A\$30m for a 6.6 per cent stake in an A\$1.73hn private road scheme in Melbourne, Australia. The project is a 22km eight-lane highway through Melbourne linking four of the city's arterial routes in order to

alleviate traffic congestion. The scheme was identified in 1990 hy Acer, Welsh Water's engineering and environmental husiness, which will do design work for the project. The toll highway will be run by Transronte, the French road operator. Welsh Water and Transroute are also in a consortium with John Laing and Tarmac to tender for private

finance road projects in the UK. Welsh Water said that investors in the Melhourne project would start getting a return soon after the start of the construction phase.
Other investors include the Australian Industrial

Development Corporation and Hastings Funds Management, which backed this week's successful £1.2bn bid by PowerGen to huy the Yallourn power station in Victoria. David Wighton

#### S&P sees cuts in life offices

Several thousand jobs within the UK life assurance sector will go over the coming months, as companies continue to cut spending on staff, property and computer systems, according to Standard & Poor's, the credit rating agency.

In a review of the sector, S&P said it expected life companies to make further significant cuts in their costs this year as they reduced their charges in order to gain market share. It expects "further substantial reductions" in the number of people selling life assurance.

The review follows moves in which S&P downgraded its ratings for companies including Clerical Medical, Scottish Provident and Norwich Union.

While it is optimistic about the sector's prospects in the longer-term, it expects new husiness levels to remain subdued both this year and next Of the 31 life offices for which it gives ratings, S&P rates one

Guardian Assurance - as having "weak" financial strength, and four - Crown Life, Friends' Provident, Royal Life, and Sun Alliance - as having "adequate" financial strength. The other 26 have higher ratings.

Despite the uncertain forecast for the sector, S&P believes the pace at which tife companies withdraw from the overcrowded UK market will be slower than some have

#### Gehe's offer document today Gehe, the German drugs wholesaler that took over AAH last year, today publishes the offer document in its £650m hid for

Lloyds Chemists, the pharmacy chain. A £621m hid for Lloyds from Unichem, the UK drugs wholesaler, lapsed last week when it was referred to the

Monopolies and Mergers Commission.

The UK authorities have asked the European Commission to allow them to examine Gehe's offer of 500p a share cash, which would also lapse if referred to the MMC. The Reuter news agency yesterday quoted an official saying that there

seemed to be a good case for referral, and adding that a preliminary decision would probably be taken later this week Shares in Lloyds put on 5p to 463p yesterday. Both UniChem and Gehe already control about 30 per cent of the UK drugs wholesale market, which would increase to

about 34 per cent on the acquisition of Lloyds. There could also be concerns over vertical integration of wholesaling with a powerful retail presence. UniChem owns some 400 pharmacies and Gehe about 300 after its takeover of AAH. Combined with Lloyds's 928 pharmacies, either one

would create a substantial retail chain. The MMC has until June 28 to make its report on the

Earnings shown beaut. Dividends shown net except Scross, Figures in brackets are for corresponding period. After exceptional charge. VAlter exceptional charge. VAlter exceptional charge. VAlter exceptional charges in brackets are for corresponding period. After exceptional charges are contacted. After exceptional charges are contacted as foreign income and charges are contacted as foreign income.

De Beers Consolidated

Mines Limited

tioners are in the Republic of South Africa)

## De Beers



Centenary AG

#### EXTRACTS FROM THE AUDITED RESULTS FOR THE YEAR ENDED 31 DECEMBER 1995

[1.39 )

Attributable to the De Beers/Centenary linked units

- Attributable earnings up 11% in Dollars (14% in Rand)
- Equity earnings up 18% in Dollars (21% in Rand)
- Dividends up 10% in Dollars (13% in Rand)

PRO	FORM	MA COMBINED INCOME ST	ATEMI	ENT	P	RO FO	RMA COMBINED BALANCI	E SHEE	T
Rand (	millions 1995		US\$ a	nsilions 1994	Rand 1994	millions 1995		US\$ 1995	ullions 1994
2 2 1 5	2 748	Diamond Recount	760	629	29 922	32 859	Linked unit holders' interests	9 003	8 432
592	805	Investment income	223	196	į		Preferred and outside shareholders'		
្រែ	261	Interest income	72	54	346	384	interests	105	97
2.467	3 021	Net income before taxation	836	700	4 571	4 038	Long- and medium-term liabilities	1 106	1 288
470	713	Taxation	197	133	34 839	37 281		10 214	9 817
1 975	2 256	Attributable earnings	624	560	{ _		Represented by:		-
2 030	3 564	Equity accounted earnings	986	833	3 565	3 713	Fixed assets	1 018	1 004
350	380	Number of linked tirus in usue (millions)	380	380	14 358	16 048	Investments	4 396	4 046
	200	Number of ander thus in uside (matterns)	380	180	15 753	17 058	Dramond stocks	4 673	4 439
		Earnings per linked unit:			232 931	294 168	Stores and marerials	81 46	66 262
5200	594c	Excluding retained earnings of associates	164c	147c	34 839	37 281		10 214	9 817
773.	938c	Including retained earnings of associates	259c	219c			Market value/directors' valuation of all investments including trade	327	
		Dividends:			46 820	<del>11</del> 630	investments	12 227	11 518
121.80	185.0c	Fer De Beers linked deterred share	50.7c	34.1c	60 320	59 275	Net asset value	16 240	15 323
178.60	154.1c	Per Centenare depositary receipt	42.2c	50.3c			Net asset value per De Beers/Centenary		
299.60	339.1c	Per De Beers/Contenary linked unit	92.9c	84.4c	15 865:	15 590c	linked unit	4 271c	4 030c
R7 53	R3.62	US Pollar/Rand average exchange rates	R3.62	R3.53	R3.55	R3.65	US Dollar/Rand year end exchange rates	R3.65	R3.55

#### DIVIDENDS

Both the De Beer- Consolidated final dividend (No. 1521 of 132 SA cents per linked deferred share and the Centenary Depositary dividend distribution (No. 12) of 3) 2 US cents per depositary receipt have been declared payable on Wednesday, 22 May 1996 to linked unit holders registered at the close of business on Friday, 29 March 1996. The registers will be closed from 30 March to 6 April 1996. The full conditions relating to the dividends may be inspected at the offices mentioned below as well as the offices of the transfer secretaries.

#### COMMENT

Sales of rough diamonds by the Central Selling Organisation (CSO) in 1995 at USS4 551 million (R16 505 million) were 7 per cent higher than the previous year's sales of US\$4,250 million (R15,007 million). Sales in the second half of the year at US\$1 001 million were 10 per cent higher than for the same period in 1994.

Worldwide retail sales of diamond jewellery are estimated to have increased in 1995 by

Mining companies in the De Beers group have historically used the "last in first out" method to value diamond stocks. In compliance with a revised statement of generally accepted accounting practice the "first in first our" method has now been adopted. The effect of this has been to increase diamond stocks and attributable earnings in the current year by US\$18 million or R65 million and in the prior year, which has been restated, by US\$4 million or R15 million.

Combined long- and medium-term liabilities at the end of 1995 were US\$1106 million, US\$182 million lower than 1994, while net current assets decreased by US\$216 million to US\$46 million, showing an overall decrease of US\$34 million.

The rough diamond market has begun 1996 in a confident mood. The price changes in 1995, the absence of outside rough, the retail market situation and the recently announced arrangements between the CSO and the Russian government have all contributed to a communing improvement in sentiment.

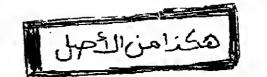
Cornes of the treaspoint annual francial statements and dividend notices will be posted to linked unit holders on or about 7 March 1996 and will also be available from the following offices:

De Beers Consolidated Mines Limited 36 Stockdale Street

Kimberley South Amen

De Beers Centenary AG Langensandstrasse 27 CH-6000 Lucerne 14 Switzerland

Anglo American Corporation of South Africa Limited 19 Charterhouse Street London EC1N 6QP England



#### COMMODITIES AND AGRICULTURE

Mining companies switched

their attention last year from

raising new funds and turned

to mergers, acquisitions and buying back their shares. The total of new equity and

convertibles raised by the min-

ing industry in 1995 was

US\$4.492bn. 56 per cent down

from the record \$10.123bn set

in 1994, according to the

annual analysis by Mr Nick

Hatch at the Flemings Global

In 1994 the industry went on

feeding frenzy and gave

investors a severe bout of indi-

gestion. Because of this some proposed fund-raising operations were withdrawn

However 1995 saw a surge in

mergers and acquisitions in

the mining sector, totalling

\$7.65bn. Of this, \$2.6bn repre-

sented the removal of mining

equity from the world's stock

markets. in addition. \$714m

was removed from the North

American market by stock

buy-back programmes at com-

panies such as Inco of Canada,

the world's biggest nickel pro-

ducer, Phelps Dodge, the big-

gest US copper producer, and Alcoa of the US, the world's

Mr Hatch says: "The result is

largest aluminium group,

Mining Group.

last year.

# North American wood | Mining industry turns its back on fund raising pulp mills slash prices

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MILLIT

North American wood pulp mills have slashed prices amid a wave of recrimination among producers about the pulp market's recent decline.

Weyerhaeuser, one of the biggest producers, started the process at the end of last week by cutting the list price of northern bleached softwood kraft (NBSK), the industry's benchmark product, by 17 per cent to US\$600 a tonne.

The latest reduction, which comes a month after a similar cut, brings NBSK prices to 40 per cent below the record \$1,000 which producers tried unsuccessfully to impose on the market last October.

Weyerhaeuser's move was sparked by a sudden drop in spot prices in response to signs of unexpectedly weak demand for paper in many parts of the world. Several North American newsprint producers have abandoned a planned 7 per cent price increase that was due to take effect on April 1. . Inventories are bulging

\$ per tonne

along the entire pulp and paper supply chain. According to the Canadian Pulp and Paper Association, Canadian pulp mill inventories climbed to 47 days' supply, from 40 days' in December and 17 days' at the peak last June.

Many mills have already announced temporary shutdowns in an effort to bring supply into line with demand. Another wave of closures is expected in coming weeks. with prices now close to some

mills' cash production costs. Mr David Pinneault, analyst at Resource Information Systems, a US consultancy, predicted that the NBSK price will bottom at about \$500 this spring. He noted that the steep drop in prices was likely to encourage more mill shut-

Pulp producers' battle for market share has been intensified by the emergence last year of Indonesia, previously a net importer, as a substantial, lowcost exporter.

downs, which in turn should

bring down inventories.

"Some players decided to compete against the Indonesians on their own terms," said one large North American prodncer. "What started as price erosion became a price collapse." Fingers have been pointed at Georgia-Pacific, the US forest products group.

Producers such as Weyerhaeuser have also stirred up controversy in the industry by trying to support the market at specific levels. "I don't agree with holding a price in a falling market," one Canadian pulp marketing executive said.

> that net mining equity issued to the market in 1995 was only

> > E COCOA LCE (E/tonne)

Last year J. Burgess Winter (left), president and CEO of Magma, saw his company acquired by BHP, headed by John Prescott

\$1.178bn or 0.5 per cent of the year-end industry capitalisa-But 1996 has started with a

boom, thanks to the unexpected rise in the gold price in January and February. Mr Hatch calculates that the mining industry has already raised \$1.073bn this year - all but \$2m of it for gold companies.

The proposed \$2.3bn bid for Aluman by Kaiser, another US aluminium group, has been withdrawn, but the \$2.385bn agreed offer for Diamond Fields Resources, which owns the huge Voisey's Bay nickel deposit in Labrador, by Falconbridge, the Canadian nickel

per cent

Kenneth Gooding reviews last year's spate of mergers, acquisitions and share buy-backs

Some analysts expect a rival offer before long. "1996 is going to be a boom year for mining corporate

financiers," Mr Hatch prom-In his analysis of last year's fund raising, he recalls the "big three deals". One was

Lihir Gold, where the partners in this Papua New Guinea proj ect (including RTZ-CRA and Niugini Mining) raisad US\$459m from the sale of shares in the new company to Australian investors. The other big deals were the French government's receipt of \$365m from the privatisation of Pechiney, Europe's biggest aluminium group, and Trelleborg of

Sweden's sale of its 24 per cent shareholding in the Falconbridge nickel group to institutional investors for \$358m.

In 1994 mining new issues totalled 5 per cent of the yearend market capitalisation, but last year the total was only 1.8

On the mergers and acquisitions front the biggest cash transaction last year was when BHP, the largest Australian group, acquired Magma Copper of the US. This was completed in January but by the end of last year \$1.39bn had been ten-

The next three largest deals also had an Australian flavour: North joined in partnership with Rio Algom of Canada to pay \$375m for international Musto and its 50 per cent share of the Bajo de la Alumbrera copper-gold project in Argen-

end Canada

France

tina; Goldfields paid \$180m for Pancontinental, another Australian company; and Homes take Mining of the US bought the minority interest in its Australian subsidiary for

As for new equity and convertibles, Mr Hatch points out that North America was the dominant market, representing 45.3 per cent of the total raised By commodity, precious metals made up 42.5 per cent of the funds raised, compared with 33.1 per cent in 1994 and 64 per cent in 1993. Base metals, which made up 24.8 per cent in 1993 and 36.1 per cent in 1994, moved up to 38.35 per cent of the total last year. Coal companies raised \$970m in 1994 (there were two big financings, by RJB Mining in the UK and Zeigler Coal in the US) but only \$44m last year.

## De Beers calms Australian row

By Kenneth Gooding, Mining Correspondent

De Beers yesterday indicated that it had gone a long way towards patching up its dispute with the Australians who were threatening to leave the international cartel of rough (or uncut) diamond producers . organised by the South African

Mr Gary Raife, managing director of De Beers' Central Organisation, suggested agreement between the cartel and the Australians would bring price stability to the market for smaller rough diamonds, which are worth US\$4bn a year and account for about 40 per cent of the total diamond market.

The news comes only days after the CSO reached agreement with Russia, another big producer that recently seemed intent on quitting the cartel.

In volume terms, Australia's Argyle mine is the world's higgest rough diamond producer but most of its output is of smaller and cheaper stones. Ashton Mining, one of the owners of Argyle, was incensed by price cuts imposed by the CSO last August which reduced the amount paid for Argyle diamonds by an average of 10 per

Mr John Robertson, Ashton's chief executive, said his company and CRA, its partner in Argyle, might not sign a new contract with the CSO when the current one ended in Jone.

Precious Metals continued

R GOLD COMEX (180 Troy oz.; \$/troy oz.)

Yesterday, however, Mr Raife said that negotiations for a new contract with the Australians started last week in South Africa and that there had been two days of "comprebensive and constructive talks. My feeling was that both sides want to agree a new con-

He snggested it was in Argyle's interest for the CSO to keep a tight grip on the market for smaller diamonds, which are usually cut in India. Mr Raife said indications that deal would be struck with Russia had already helped stabilise prices of small diamonds. However stocks of both rough and polished stones - and bank debts - remained high in

GRAINS AND OIL SEEDS

WHEAT LCE (£ per torne)

## Gold project wins approval

By Kenneth Gooding

After an arduous permitting process lasting 41 months and some acrimonious litigation, the US\$319m Pipeline project in Crescent Valley, Nevada destined to become one of North America's biggest gold producers - yesterday received the go-shead.

Placer Dome of Canada, the 60 per cent joint owner and operator, said the Nevada Bureau of Land Management had approved the plans, and construction would start immediately. The open pit Pipeline mine is expected to start gold production in the middle of

next year at an annual rate of 310,000 troy ounces, Reserves of 4.3m ounces will last 12 years. Placer's partner in the project is RTZ-CRA, the Anglo-

Australian mining group,

which has 40 per cent. Last year Placer paid \$30m to settle a legal dispute with Gold Fields Mining, part of Hanson, the Anglo-American conglomerate. Gold Fields claimed that Placer had not fully disclosed the nature of the Pipeline discovery when it secured the option contract to bny Gold Fields' mining claims in the area, near the existing Cortez gold mine that has been operating since 1968.

MARKET REPORT

## Grain futures continue to slide

Fatconbridge Canada

Lihir Gold

Pechiney

Goldfields

Filo Algom

By Deborah Hargreaves

Grain futures at the Chicago Board of Trade continued to slip yesterday in fast trading after Monday's sell-off, but traders said sales were largely technical and not in response to a stronger outlook for grain. Mr Jerry Gidel, agricultural

analyst at Dean Witter Reynolds in Chicago, said the drop was confusing: "There is nothing in any forecast which suggests any change in moisture levels in the main winter wheat growing region."

MEAT AND LIVESTOCK

IN LIVE CATTLE CME (40,000bs; cents/lb

A sharp drop in wheat

futures pushed other agriculturals down, with March wheat falling 7% cents to \$5.05 a bushel at mid session. Traders

Big mining and metals deals of 1995

Musto

acquired Magma Cooper (US)

sold shares to public

Trelleborg sold 24%

acquired Pancontinental

acquired minority of

and selling out of the agricultural complex.
"The funds have been very active in these markets and now they're taking profits. The psychological factor of the markets falling is prompting

said bedge funds were unwind-

ing speculative long positions

more selling," said one trader. The March corn futures contract was 6% cents lower at \$3.82 a bushel. Selling pressure was also spreading into soya-

**JOTTER PAD** 

beans, which Mr Gidel said looked most vulnerable in the sbort term. "We could be looking at a lacklustre scenario for soyabeans in the next few weeks, but there is still a lot of uncertainty about the crop and I'm not saying these markets have seen their peak," be said.

(As at Thursday's close) +800 to 74,380 +800 to 74,380 -200 to 347,775 -1,626 to 99,200 -366 to 38,256 -1,325 to 632,225

#### COMMODITIES PRICES

BASE METALS

LONDON METAL EXCHANGE # ALUMINIUM, 98.7 PURITY & per torne) Kerb close 1623-4 Total daily turnover E ALUMINIUM ALLOY (\$ per ton 1355-60 Kerb close Open int. Total daily turnover LEAD (\$ per tonne) 758-56.5 757-58 771-72 768/747 763.5-64.0 36,819 8,227 Total daily turnover MICKEL (\$ per tonne) 7720-30 Open int. Total daily turnover 40.339 # TIN (\$ per torune) Close Previous High/low AM Official 6145-55 6110-20 Kerb close Open int. 4.855 ZINC, special high grade & per 1030.5-1.5 1037-38 1032.5/1032 1062-52.5 Open int. Total daily turnover COPPER, grade A (\$ per tonne) 2537-38 . 2587-90 2587-800

State of the state HIGH GRADE COPPER (COMEX) 117.95 -1.20 118.05 117.90 1,205 5,960 117.05 -1.30 118.00 117.00 240 1,535 118.45 -1.40 118.00 116.30 6,293 18,503 116.45 -1.40 118.00 116.50 4 767 114.60 -1.20 115.40 114.60 4 767 4.624 113.55 -1.00 114.50 113.45 679 4.624 113.55 -0.80 112.00 111.50 41 2.947 ent today 111,55 -0.80 112.00 111.50 a promise 44 PRECIOUS METALS E LONDON BULLION MARKET May be promoted to the (Prices supplied by N M Rothschild) Gold(Troy oz) \$ price £ equiv SFr squiv Close 383.10-383.50 Opening 392.70-394.10 Morning for 382.90 257.212 473.052
Attainment for 393.60 257.592 473.619
Day's High 393.60-394.20
Day's Low 382.45-392.85 Previous close 383.50-384.00 .4.29 e months .3.98 12 months

3 months .

5 months

Gold Coins Krugemand Maple Leaf

350.15

369.05

\$ price 393-396 404,90-407,40

541.65 547.60

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£ eguiv. 257-258

60-62

III LIME AM Official E/S rate: 1.5281

LME Closing E/\$ rate: 1.5290

PLATINUM NYMEX (50 Troy oz.; \$/troy oz.) 408.3 +0.3 408.5 406.0 5.107 14,390 410.7 +0.2 410.5 408.0 903 6,047 413.0 +0.2 413.0 412.0 21 1,481 415.0 +0.2 - 526 786 4,031 22,834 PALLADRUM NYMEX (100 Troy oz.: \$/troy oz.) 134.25 +0.50 134.75 133.50 58 203 134.75 +0.50 135.25 132.50 570 5.982 136.00 +0.50 - 1 130 137.25 +0.50 - 5 -SILVER COMEX (5,000 Troy oz.; Cents/troy oz.) 18.40 +0.20 19.45 18.13 42.864 90.749 18.43 +0.10 18.50 18.25 25.001 67.847 17.94 +0.04 18.00 17.82 10.441 42.231 17.82 — 17.86 17.92 52.23 36.799 17.42 — 17.43 17.33 15.95 18.464 17.28 — 17.30 17.28 1,163 16.030 CRUDE OIL IPE (\$/berrel) Latest Day's Open price change High Low Yel lot 18.14 +0.12 18.15 16.03 2,825 33,638 15.84 +0.06 15.90 15.85 695 8,241 15.87 +0.11 15.90 15.80 275 11.832 38,443 208,634 HEATING OIL NYMEX (42,000 US gala; c/US galls.) Latant Bay's | Communication | 48.05 +0.19 48.20 47.85 1.938 12.232 47.85 +0.24 47.95 47.70 640 7.874 48.80 +0.58 - 128 5.554 Spot. 1.5296 3 miles: 1.5268 6 unites: 1.5238 9 miles: 1.5208 48.95 . +0.24 49.00 48.85 121 2,728 . 24,627 86,122 158.75 +2.75 170.75 165.50 7.461 23,030 158.25 +1.50 156.75 157.00 8,169 16.210 152.29 +0.59 153.25 152.25 2,106 7,067 150.00 +1.00 150.50 149.75 1,005 7,820 149.00 +0.50 146.50 148.50 70 4,989 149.25 +0.50 150.00 148.50 674 2,942 17,942 73,567 M NATURAL GAS WINEX (10,000 marebil; Strangell) 2.165 -0.095 2.305 2.180 17,323 25,294 2.060 -0.060 2.155 2.060 4,819 18,076 2000 -0.001 2.054 1.990 1,480 14,655 1.990 -0.101 2.054 1.990 1,480 14,655 1.990 1.945 1.059 12,990 1.945 1.059 12,990 1.945 1.945 1.945 1.945 1.945 1.945 1.945 1.945 1.945 1.945 1.945 1.946 1.945 1

MAZZE CST (5,000 bu mirr; cente/56tb bushet) BARLEY LCE (E per tonne) SOYABEAN OIL CET (60,000/bet cents/b) M SOYABEAN MEAL CST (100 tons; \$/ton) Mar May Jul POTATOES LOE (E/torne)

225.0 105.0 +21 1300 1295 +20 1341 1315 1347 134 All futures data supplied by CMS Minor Metals, European free market, from Metal Bulleth, \$ per ib in warshouse, unless otherwise stated (ast weeks in braciust, where charged), Anti-mores 99,6%, 5 per tisme, \$,450-3,650 (2,425-3,650, Bearnette min. 99,99%, torne lots 3,50-4,00 (3,65-4,10), Cadmium min. 69,95%, 148-160 (150-165) cents a pound: Cobatt MB free market, 98,8%, 22,70-3,03 (90,00-30,75); 95,3%, 25,70-27,50 (27,30-28,00), Mercury min. 99,95%, 5 per 76 lb flask, 153-175 (160-172), Molybelanter duramed molybelo oxide, 3,90-4,20 (3,95-4,20), Selenteum min. 99,5%, 3,45-4,10 (3,50-4,20), Tangsten ores standard min. 65%, 5 per torne unit (10kg) WO,, cif. 50-60 (50-58), Varsadium min. 95%, ckf. 2,85-3,03 (2,80-2,95), Urandium Nuesco mochange value, 10,00. 58.50 -0.13 59.20 57.00 8,083 30,276 57.95 +0.05 58.20 57.30 3,078 15,380 58.20 57.30 57.20 58.65 56.95 +0.15 57.20 58.65 55.65 +0.16 55.76 55.40 54.30 +0.10 54.30 54.30 784 3,655 53.65 +0.90 - 235 702

888 38 240 882 1,658 27,632 918 612 18,464 75 1,433 70 278 638 6,328 WATEAT CRT (5,000bu min; cents/60th bushel) COCOA CSCE (18 termes; \$/termes) 508.25 -3.25 510.50 505.00 2.426 7,306 494.59 -7.00 505.00 492.00 5,347 28,285 457.00 -10.25 488.50 453.50 47.055 48,795 480.00 -9.25 489.50 450.00 572 8,782 471.75 -4.25 489.00 470.00 794 8,808 472.00 -8.00 480.00 472.00 55 281 18,755198,882 1214 -f1 1229 1210 7 198 1230 -11 1243 1229 4,416 38,868 1255 -8 1266 1254 1,839 20,412 1278 -9 1289 1278 437 11,853 1313 -8 1322 1373 1,670 12,204 1340 -9 1349 1340 27 7,500 COCCA (ICCO) (SDR's/tonne) 383.25 -6.00 389.00 381.50 53.505 24.508 COFFEE LCE (\$/tonne) 2000 +5 2030 1985 425 4,182 1834 +25 1855 1791 2,482 12,880 1788 +26 1775 113 232 4,389 108.25 +0.25 107.75 107.75 20 335 108.80 +0.05 108.75 108.25 29 459 105.60 -0.20 - - 37 107.25 -0.40 107.90 107.50 40 463 108.25 -0.40 - - 53 COFFEE C' CSCE (37,500ths, cents/lbs) 118.90 +2.40 117.40 113.85 72 1,076 114.20 +2.55 114.90 110.70 4,071 15.242 113.00 +2.69 113.30 109.75 372 111.85 +2.40 112.00 106.85 148 110.50 +2.15 111.50 107.80 71 110.50 +2.00 110.00 110.00 6 E SOYABEANS CET 5,000m min; certs/500 bushell 713.75 -6.50 722.75 710.00 7,730 6,883
723.50 -6.50 722.50 720.00 174,710 70.659
722.00 -6.00 741.90 725.00 8,755 48,001
733.25 -6.00 741.90 730.50 289 5,466
733.25 -3.75 732.50 734.00 279 3,665
720.50 -4.00 729.00 720.00 38,930 50,955
889.894 142.895 4,740 25,535 COFFEE (ICO) (US cents/pound) 23.45 -0.05 23.52 23.22 5.587 4.988 23.60 +0.02 24.02 23.68 8.970 37.056 24.16 - 24.40 24.09 2.983 25.767 24.26 - 24.52 24.30 1.307 7.463 24.55 - 24.75 24.49 307 3.770 24.75 +0.07 24.90 24.55 95 2.894 NoT PREMIUM RAW SUGAR LCE (cents/los) E WHITE SUGAR LCE (SADTHE) 
 377.7
 +0.3
 378.2
 378.0
 511
 14,031

 358.2
 +1.2
 358.5
 357.0
 438
 7,141

 322.9
 +2.8
 323.0
 321.0
 234
 4,876

 313.8
 +1.0
 2,568

 309.2
 +1.3
 310.5
 305.5
 25
 705

 306.7
 +0.2
 534

 1,009
 28,855
 25.5 -27 225 225 252 5,452 4,285 23,248 230,1 -3.1 234.4 229.0 15,582 33,248 239.3 -2.8 236.5 22.9 3,918 22,757 234.0 -2.4 227.0 233.2 446 1401 234.4 -2.2 236.2 231.2 118 3,170 236.5 -1.9 232.3 230.0 118 2,545 23,359 65,852 SUGAR "11" CSCE (112,000lbs; cents/lbs) 11.72 +0.02 11.74 11.53 4.857 61.576 10.87 +0.07 10.88 10.74 1,875 35,607 10.51 +0.07 10.54 10.38 508 27,547 10.24 = 10.28 10.16 140 14,168 10.16 +0.05 10.17 10.13 90 3.485 10.00 — 10.00 10.00 30 1.226 22 979 COTTON NYCE (50,000lbs; cents/lbs) 37 814 132 1,356 82 189 10 1,718 Mar May Jel Oct Doc Mar Total 81.20 -0.28 82.05 81.30 131 185 82.38 -0.40 83.25 82.35 5,177 21,858 82.97 -0.52 83.90 82.93 1,272 11,787 81.25 +0.02 81.45 81.10 101 2,375 79.85 -0.10 80.15 79.85 954 17,115 80.83 -0.05 81.00 80.87 10 1.514 41 621 - 32 213 4,780 R ORANGE JUICE NYCE (15,000fbs; cents/fbs) 130.70 +0.20 131.50 130.40 338 432 125.40 -0.55 127.40 126.40 267 2,555 129.40 -0.65 125.00 124.60 119 1,990 121.60 -0.65 125.00 122.00 28 651 121.60 +0.05 121.50 121.60 69 2,417 **YOLUME DATA** Open interest and Yolume data shown for contracts traded on COMEX, NYMEX, CST, NYCE, CME and CSCE are one day in arrears.

■ REUTERS (Base: 18/9/31×100) Mar 5 Mar 4 month ago year ago 2129.2 2128.6 2157.8 2325.8 GRS Futures (Base: 1967=100) Nar 4 Mar 1 month age 243.61 244.46 245.94 B GSCI Spot (Bass: 1970=100)

Mar 1 month ago year ago 196.50 196.50 176.58

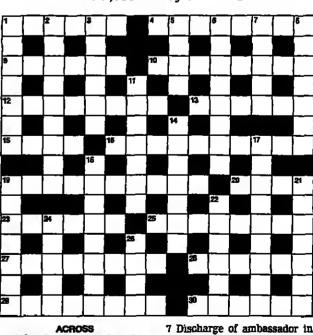
66.475 -0.600 67.000 65.850 1,461 66.550 -0.950 67.200 66.850 2,336 63.225 -0.750 63.900 63.000 704 LONDON TRADED OPTIONS (39.7%) LIKE 1700 ..... 2400 \_\_\_\_\_ 140 83 45 E COFFEE LCE BRENT CRUDE IPE Apr LONDON SPOT MARKETS \$17.69-7.71 Premium Gasoline Heavy Fuel Of Naphtha Jet fuel Diesel \$167-169 Petroleum Argus, Tel. London (0171) 359 8792 **OTHER** Gold (per troy ozië Silver (per troy ozië Platinum (per troy oz.) \$405.25 Palladium (per troy az.) \$132.25 122.0c Lead (US prod.) Tin (Kusie Lumpur) Tin (New York) 41.75C 15.70m 268.50c +0.08 -2.00 Cattle five weight)†
Sheep (ive weight)† 119.64 -1.64 133.02 106.68 Pigs (live weight)† Lon. day sugar (new) Lon. day sugar (wis \$312.4 +0.2 113.5

Barley (Eng. feed) Maize (US No3 Yell Wheat (US Dark North) Unq. Rubber (Apr)♥ Rubber (Mey)♥ Rubber (KL RSS No1) Coconut Oil Philis \$507.58 470.0v Paim Oil (Malay.)§ Copra (Phiệ§ beens (US)

E per tonne unique otherwise stated, p perceifig, c cents/fb.
i ringgiftig, m Mobilysten centsiftig, u Mocif w Apr., y Foblier, v Agrilley London Physics 5 CF Rottedon, 8 Bullion marked close, 4 Sheep (Live weight prices).
Charge on uses, thicks are for previous teats.

#### CROSSWORD

No.9.011 Set by DANTE



1 Lehar composition about love set in Pakistan (6) 4 Highflier's pranks (8) (7) 11 Like a hand? Get a couple of 9 This French rebel is a red (6) friends (7) 14 Washed np when everyone

12 Struggle in which the Services prove decisive (3-5) 13 Snooker on the green? (6) 15 Note goes to small house in 18 Arrival of actor on stage to part of London (4) 18 Arrival of actor on stage to produce delight (8)

16 I'm in prison without money, 19 Bill includes a broken chair that's the snag (10)
19 Nepal organised equipment for mountain staff (10) 20 Not a cheap term of affection 22 Current charge for what solic-

(4)
23 Readjusts his car seats (6)
25 Liking for a swansong (6)
25 Liking for a swansong (7) 27 Is it dealt with at the end of a medical textbook? (8)

DOWN 1 Places drawn roughly to scale (7) 2 Chastise wanton whores with

5 H.G. Wells baro, we hear 6 Permit one journey if you

Venice (4) Solution 9,010 29 Young female accompanist (8)
30 Attituda a driver may take, of course (6)

METALIS OFFEINCES

A A E U D H C

NICKEL SLUGGARI

.... his guilt is a possibility

was in bed (7)

that's antique (7)

itors do (6) 24 Pirst-class letter (5)

suite (7)

17 The Spanish girl, putting to

21 Regret about arranging it en

26 Take hat round beach near

back on, achieves uplift (9)

#### INTERNATIONAL CAPITAL MARKETS

## Traders torn between conflicting signals

By Samer Iskandar in London and Lisa Bransten in New York

Government bond markets lacked inspiration yesterday, as traders were torn between conflicting signals from both sides of the Atlantic.

With US economic activity appearing stronger than previously believed, a rate cut by the Federal Reserve seems increasingly unlikely.

in the UK, the mood was more positive following comments by Mr Eddie George, the governor of the Bank of England, after a board meeting of the European Monetary

Institute in Frankfurt.
Mr George said be was "quite encouraged by the prospects after the last inflation report," which some observers took as a hint that conditions were ripe for a cut in Britisb

■ US Treasury prices gave up some of the gains made on Fri- Wall Street consensus on

taking and worries about the strength of the economy.

Near midday, the benchmark 30-year Treasury was down 🖺 at 94%, to yield 6.391 per cent, and the two-year note was 🗓 lower at 991, yielding 5.276 per cent.

The fact that the yield on two-year notes rose above the federal funds target rate of 51% per cent was a sign that investors do not expect the Federal Reserve to lower interest rates at the March 26 meeting of its Open Market Committee.

The market also interpreted comments from Mr Alan Greenspan, the Fed chairman. as a signal that monetary policy would remain steady. Mr Greenspan told the Independent Bankers Association of America that some indicators may be understating US ecooomic growth.

day and Monday in early trading on a combination of profit-rates has been in flux, leading at HSBC, believes this underto volatile trading and sharp swings in the shape of the yield curve. Yesterday, the yield curve flattened to 112 basis points from 116 points late on Monday.

#### GOVERNMENT BONDS

UK government bonds were driven by international markets yesterday, as volumes and volatility remained subdued, while traders waited for a widely-expected cut in UK offi-

cial interest rates. However, gilts under-performed the US and major continental European markets. Liffe's June 10-year gilt future closed at 1071. down 1/2. Ten-year spreads widened by 4 basis points to 192 points over Treasuries, and by 3 basis points to 163 points over

performance is "in part redressing the outperformance of the last few weeks." He is convinced there will be a rate cut, but warms of "more downside risk than upside potential", since he considers the next easing to be largely

reflected in current prices.

■ German bunds opened lower and extended losses during the afternoon in the wake of falling US Treasuries, but also suffered from rumours, later denied hy the Bundesbank, that revised M3 money supply growth in January could be much higher than the provisional figure of 8.4 per cent. The March 10-year bund

future closed at 97.65, down

0.32. In the cash market, the

German yield curve steepened

slightly as the 10-year yield rose hy 6 basis points to 6.83 "Trading in bunds is purely

on Liffe. He warned of potentially bigh volatility if this week's unemployment and GDP figures, due out today and tomorrow respectively, diverge from expectations.

■ Frencb bonds were relatively well supported in the unstable international environment. The yield curve steep ened slightly as short rates drifted lower and longer maturities remained almost

Matif's March 10-year bond future closed at 121.86, down 0.02, and the March threemonth Pibor contract settled at 95.67, up 0.05. In the cash mar-ket, the 10-year yield was up one basis point at 6.56 per cent, and the 10-year spread over German bunds tightened by 4 basis points to 24 points.

The main factors supporting OATs were the strength of the French franc and a fall in overnight interest rates.

"This revived bopes of a cut in official rates on Thursday, said Ms Nathalie Fillet, a bond strategist at Paribas in Parls. Some analysts are more cautious and believe the next rate cut is already priced into the market, but Ms Fillet is confident that even if there is no

easing this week, "a rate cut is

■ Spanish bonds continued to fall, as the central bank left

still on the cards".

rates unchanged. "Market participants who were expecting a monetary easing immediataly after [last Sunday's] election now realise the Bank of Spain will not act before the political uncertainty is over, and that could take days," said an institutional bond investor.

The March futures contract on 10-year Bonos closed at 94.10, down 0.42 but observers believed the recent correction was "overdone . . . and unlikely to go much further".

# Kvaerner raises plar dawi £450m bridge loan for Trafalgar bid

Kvaerner, the Norwegian engineering and shipbuilding group which has made an agreed £904m takeover hid for Trafalgar House of the UK, has become the latest company to raise acquisition financing in the international syndicated loans market.

#### SYNDICATED LOANS

Four banks - Chemical, Den norske Bank, Enskilda, and SBC Warburg (which advised Kvaerner on the takeover) are providing Kvaerner with a two-year "bridge" losn of £450m. Details will be disclosed in the offer document, which is likely to he published early

next week. Evan though the bid is not hostile and the banks are lending directly to Kvaerner, rather than a special-purpose vehicle - as was the case in some of the takeovers of UK regional electricity companies the interest margin on the loan is expected to be well in excess of that on a similarsized facility Kvaerner took

out last year. The old loan pays 25 basis points over London interbank offered rate. On the new loan, the leveraged nature of the Trafalgar House purchase, the asset disposals involved and the short life of the loan suggest Kvaerner will have had to

agree to an interest margin in the high 30s. The arrangers of the loan are expected to go straight to general syndication, because a

sub-underwriting stage is not necessary due to its size. News that the proposed merger between MAI, the UK television and financial services group, and United News

& Media, owner of Express

7.11 8.01 8.12 8.20

2,79 2.79 3.72 3.72

8.75 8.68 8.62

Coupon yield — - Mediant coupon yield — Mer 4 Yr. ago Mar 5 Mar 4 Yr. ago

7.17

7,15 8.01 8.09

8.78 6.80 6.80

1.52 2.43 3.52 3.76

referred to the Monopolies and Mergers Commission means the £535m and \$255m threeyear facilities arranged by Chemical and Lloyds for the new group can proceed. The two facilities, which carry margins of 27.5 basis points over Libor, are likely to be underwritten in the next few days. Although acquisition financ\_\_\_\_\_

- E-45 . 149%

ing has dominated the syndicated loans market in recent months, there has been a steady flow of corporate lending, mainly for refluencing. Rank Xerox, the office equip-

ment supplier, yesterday said it had asked Banque Nationale de Paris, NatWest Capital Markets and Union Bank of Switzerland to arrange a £400m five-year revolving credit facility. The facility fee and margin over Libor have been set at 7.5 basis points each, and there is a ntilisation fee of 2.5 points.

The other notable corporate facility in the past week was a DM1bn seven-year revolving credit for Preussag, the German metals and engineering group. Like Rank Xerox, the facility fee and tha margin over Libor have been set at 7.5 basis points each. Utilisation fees range from zero to 4 per cent. The arranger is WestLB and Preussag's relationship hanks will be invited into the loan Bankers said it was refreshing to see WestLB win a big loan from corporate Germany, the preserve of Deut-sche Bank and J.P. Morgan in recent times.

A \$350m five-year amortising loan for Investcorp, the Bahrain-based investment group, is now in general syndication. The original group of arrangers - Bankers Trust, Bank of Tokyo, Chemical, Credit Suisse, NatWest, Société Générale and WestLB - has been expanded to include another nine

STRESS RATES

DESEY RATES

## Successful \$200m debut for Norwegian telecoms group

Telenor, the Norwegian stateowned telecommunications company, made a successful eurobond debut vesterday with \$200m of five-year bonds.

The paper was priced to yield 24 basis points over Treasuries, 3 basis points below outstanding bonds issued by the UK's National Grid. Despite that somewhat aggressive pricing, the issue attracted strong demand from investors seeking exposure to the telecommunications sector and Norwegian risk.

"Norwegian entities are very infrequent borrowers on the eurobond market," said one

Lead manager J.P. Morgan said it sold all the bonds by the tlme they were priced, and

WORLD BOND PRICES

reported a mix of institutional and retail demand in Europe and east Asia. After weeks of preparation,

the Inter-American Development Bank launched its \$1bn 10-year global issue yesterday. It was priced at 29 basis points

#### INTERNATIONAL BONDS

over Treasuries, 2 to 21/2 basis points over the World Bank's 10-year benchmark and 2 basis points below the Asian Development Bank's last 10-year

According to lead managers Merrill Lynch and SBC Warburg, some 35 per cent of their allocation went to North and South America, 30 per cent to investors in the UK and

issue.

Europe, 26 per cent to Japan and the rest to non-Japan Asia.
"We have achieved our major strategic objectives: broad distribution and good pricing, and expect an optimal secondary market performance," said Mr Saul Hanono,

the bank's chief of funding. Switching into the IDB issue from existing eurobonds helped push spreads in the secondary market out by about 2 basis points in the 10-year sector and I basis point in fiveyears, dealers said.

Also weighing on secondary spreads has been the high cost of borrowing 10-year Treasuries in the repo market as a bedge against long eurobond positions. Due to a lack of stock, 10-year dollar repo rates have fallen from around 5% per cent last week to about 11/2 per

III US TREASURY BOND FUTURES (CBT) 5100,000 32nds of 1009

Borrower	Amount	Coupon	Price	Maturity	Fees %	Spread bp	Sook-runner
US DOLLARS		-			~		
Inter-American Deviment Bank	1bn	6.125#	99.117R	Mar 2005	0 325R	+29(5%%-06)	Merriil Lynch/SBC Warbury
Telenor	200	5.75	99.563R	Mer 2001	0.275R	+24(5%%-01)	JP Morgan Securities
Lorley(a)§	110	2.50	100.00	Apr 2001	2.50	- '	Jardine Fleming
Banco Safra(b)	100	6.00#	99.85R	Mar 2004	0.675A	+337(5%-99)	UBS
Swedish Export Credit	100	5.00#	100.025	Mer 1997	0.05		Lehman Brothers Inti
Kyo Midoric) ф	94.75	2.625	100.00	Mar 2000	2.25	-	Misubishi Firence Inti
D-MARKS							
BNG	300	4.25	99.61F(	Apr 1999	0.1875FI	+12(5%%-99)	ABN Amro/Goldmen Sects
SWISS FRANCS							
UPS of America(s)	200	3.25	102.15	Oct 1999	1.50		Memil Lynch Capital Mkts
GUILDERS							
Waterschapebank	250	6.37S	99.17R	Mar 2006	0.325R	+20(6%-08)	ABN Amro Hoare Govett
LUXEMBOURG FRANCS							
City of Copenhagen	2bn	8.625	102.30	Apr 2006	2.00		acee/bil
AUSTRALIAN DOLLARS							
National Australia Bank(d)	100	8.00	100.775	Apr 2001	2.00	-	Hambros Bank
ECU							
Crédit Local de France(e)	50	5.25	26.265R	Dec 1999	0.225R	+40(5%-98)	Morgan Stanley & Co Inti

cent, leading to a sharp rise in borrowing costs. "This makes traders reluctant to be long stock, so they've been selling it and that's causing spreads to widen," said a dealer.

 Yorkshire Water, the UK utility, yesterday announced that it is repurchasing Its 6.75 per cent convertible bonds due 2008 at a price of 112, via James Capel and Cazenove

1 Up to 5 years (23)

6 Up to S years (1)

FT-ACTUARIES FIXED INTEREST INDICES

122.82 148.21 161.60 196.82 143.07

-0.01 -0.18 -0.36 +0.38 -0.14

+0.02

122.84 148.45

 Standard & Poor's bas assigned a B+ rating to Brazil's Y30bn five-year samural issue which was launched on Monday and said its outlook on Brazil's rating is positive.

2.16 2.93 2.22 3.85 2.56

1.58 S yrs 1.21 15 yrs 2.52 20 yrs 0.00 irred.† 1.57

Up to 5 yrs Over 5 yrs

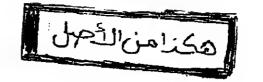
0.63 0.00

BENCHMA	RK GOVE	RNM	ENT BO	NDS				M BUNO F	UTURES	OPTIONS (	UFFE) DM	250,000 pd	ints of 1009	4	
		Red		Day's		Week	Month	Strike		CA	LLS			PUTS -	
	Coupon	Date	Price	change	Yleid	890	ago	Price	Apr	May	Jun		Apr Ma	y Jun	5
Australia	10 000	02/06	110,4150	-0,500	6,44	6,72	8.02	9650	0.78	1.13			.50 0.85		1,8
Austra	6.125	02/06	97.4900	-0 160	6.47	6,53	6.13	9700	0.51	0.86			73 1.06		2.1
Belgem	7.000	05/06	101.7100	-0 190	6.76	6.90	6.30	9750	0.30	0,63			.02 1,36		2.4
Carada *	6.750	12/05	109.4700	-0.010	7.37	7.52	7.12	Est, vol. tota	, Calls 185	39 Puts 238	3. Previous	day's open	Int., Calls 253	224 Puts 16	1427
Denmark France BT	AN 7,000	10/06	103,4000 105,6250	-0.250	7.49 5.58	7.71 5.77	6.80 S.41								
	AT 7.250	03/06	104,8000	-0.260	6.58	6.74	6.38	Italy							
Germany Bund	5.000	01/06	97.6100	-0.340	8.33	6.42	5.85	M NOTION	AL ITALL	AN GOVT.	BONO (B)	TP) FUTUR	E\$		
reland	8.000	08/06	101,5700	-0.230	7.76	7.89	7.24	(LIFFE)"	Lra 200m	100ths of	100%				
Italy	10 500	09/05	102,4100		10.101	10.45	10.03		Орел	Sett price	Change	High	Low	Est. vol	Open
Japan No 1		03/00	116,9010	+0.360	1.88	2.13	1.73					_			
No 1	182 3.000	09/05	98.4320	+0.036	3.22	3.21	2.97	Mar	111.72	111.42	-0.06	111.99	111,31	10498	987
Netherlands	8.000	01/06	97.7300	-0.310	8.31	6.41	6.85	Jun	111.40	110 62	-0.43	111,57	110.60	46356	4310
Portugal	11.875	02/05	113.0000	-0.120	9.64	9 58	9.21	IN ITALIAN	GOVT. B	OND (BTP)	FUTURES	S OPTIONS	(LIFFE) Line	200m 100r	the of 10
Span	10,150	01/06	100,9600	-0.440	9.98	9.71	9.45	Strike			us			PUTS	
Swaden	8.000	02/05	82.0100	-0.950	9,02	6.87	8.25	Price		Jun	Se		Jun	ruis -	Sep
UK Gatts	8.000	12/00	103-26	-6/32	7.03	7.21	6.70			_	-	•			
	7,500	12/06	97-22	-12/32	7.82	7.96	7.38	11060		2.06	2.6		1.94		2.92
US Treasury	9.000 5.625	10/08	108-05 97-11	-14/32 -6/32	7.96 5.98	6.07 8.05	7.54 5.69	11100 11150		1,80 1,56	2.4° 2.20		2.18		3.19
To treasmy.	5.025 6.000	02/26	94-21	-14/32	6.40	6.47	6.10					-	2.44		3.48
CU (French Gov		04/05	103.3500	+0.200	5.99	7.23	8.71	Est. vol. total	. Calls 430	5 Puts 1849.	Previous 02	ny a open mi	Curto 47262	Puts 42283	
us intere us intere	ST RATI	S		Bills and	Bond Yle	kds	International	Mar Jun	Open 94.90 94.50	Sett price 94.08 93.7S			Low 93.81 93.32	Est. vol. 79,606 3,823	Open 47,12 7,28
rana rate raker loan rate	. 64 1			5 04 1h	ree year _		541 562		AL UK G	LT FUTUR	es (LIFFE)	£50,000 3	2nds of 100	%	
rot funds	54 9	Almonta 4		502 10	442		5.97		Open	Sett price	Change	High	Low	Est. vol	Open
ed funcs at intervente	UA U	ne year		5.08 30	- YEST		6.39	Mar	108-16	107-28	-0-1S	108-23	107-27	21092	S172
								Jun	107-23	107-03	-0-18	107-31	107-00	66274	9715
								M LONG G	ILT FUTU	RES OPTIC	NS (LIFFE	\$ 250,000 (	14ths of 100	%	
								Strike		CA	ц\$			PUTS	
								Price	Apr	May	Jun	Sep A	upr Mag	/ Jun	Se
		ID OP	TIONS					107	0-56	1-26	1-48 2	2-06 b-	50 1-20	1-42	2-5
SOND FUT	UKES AN							106	0-28	0-61	1-17 1	1-44 1-	22 1-55	2-11	3-26
BOND FUT	UKES AN							109	D-12	0-38	0-57 1	1-21 2-	06 2-33	2-51	4-03
BOND FUT	URES AF								V- 12	0-00					
BOND FUT	URES AN												Cats 36939		
France		FUTURE	S (MATIF) F	Fr500,000									Calls 36939		
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France NOTIONAL FF	RENCH BOND	e Chang	as High	Lov	Es		Open ini.	Est voi lotal	Ca#6 2954	Pula 2548.	Previous da	y's open int. ,000		Pus 24415	Open
Mar 122	ENCH BOND on Soft one 10 121 96	e Chang	ga High 6 122.20	Lov 5 121.0	, Es	6,759	123,658	Ecu Ecu st Ecu BO	Cass 2954 ND FUTU Open	Puls 2548.  RES (MATE	Previous da F) ECU100. Change	y's open inc ,000 High	Low	Puts 24415	Open
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GOTTRANY I NOTIONAL GET	MAN BUND	FUTURES (I	LIFFE)' DMC	250,000 10	Oths of 100	%		LIFFE)				JAPANESE GO	OVT. BON	D FUTUR	58		
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nan Dev Bir 8½ 01	1000 1000 1000 1 300 1 1000 150	1013 1084 1104 974 1084	102 <sup>1</sup> 3 106 <sup>1</sup> 2 111 <sup>1</sup> 8 97 <sup>3</sup> 3 109 <sup>1</sup> 8 106 <sup>3</sup> 8 108 <sup>5</sup> 8 102 <sup>5</sup> 8	*******	5.44 6.34 5.95 6.33 5.94 5.85 6.04 5.85 5.73	Gerificance Lux 9 <sup>1</sup> / <sub>2</sub> 99 LF	107 104 1/4 104 1/2 111 1/4 102 1/4 105 1/4 105 1/4 112 111 1/4	104 <sup>1</sup> 2 104 <sup>7</sup> 2 111 <sup>7</sup> 3 102 <sup>5</sup> 7 105 <sup>7</sup> 3 108 <sup>5</sup> 7	4	7.16 5.43 6.19 6.75 7.45 6.50 5.83	Lloyds Benk P Malaysia & Co New Zastand: Alova Scotla & Ontano 0.99 State Bk Victo Sweden 0.99 Sweden 4 g Cr	99	500 	92.42 92.67 99.88 98.94 98.87 99.77	98.1 98.1 100.1 98.1 100.1 100.1	99 98 13 15 10 12	54 54 54 55 56 56 52
pan Dev Bit 8½ 01 rea Bec Power 8½ 03 rea Bec Power 8½ 03 rea y 7½ 97 tario 7½ 03 ter Kontrolbank 8½ 01 raugai 5¾ 03 bec Hydro 9½ 99	1000 1000 1000 1 300 1 1000 150	1013 1084 1104 974 1084	102 <sup>1</sup> 3 106 <sup>1</sup> 2 111 <sup>1</sup> 2 97 <sup>3</sup> 3 106 <sup>1</sup> 2 1107 106 <sup>5</sup> 2 102 <sup>5</sup> 3 102 <sup>1</sup> 3 101	*********	5.44 6.34 5.95 6.33 5.94 5.85 6.04 5.85 5.73 6.24 5.60 6.35	Gerificance Lux 9 <sup>1</sup> / <sub>2</sub> 99 LF	107 104 1/4 104 1/2 111 1/4 102 1/4 105 1/4 105 1/4 112 111 1/4	104/2 10472 11174 10257 10872 110 112/2 11153 10374	<b>-</b> 19	7.16 5.43 6.19 6.75 7.45 6.50 5.93 6.56 7.07 6.63 7.49	Licyds Benk F Malaysia & Ot New Zealand Nova Scotle & Ortano 0 99 Renfe 0 98 State Bk Victo	99	500 550 1000 500 2000 500 125 1500	82.42 98.67 98.88 98.84 98.87 99.77 99.99 100.02 99.81	98.1 98.1 100.1 98.1 100.1 100.1	99 98 13 15 10 12	5.4 5.4 5.6 5.6 5.6 5.6
aan Dev Bit 8½ 01	1000 1000 1000 1000 1000 1000 1000 100	101 <sup>2</sup> 9 108 <sup>1</sup> 4 110 <sup>2</sup> 4 108 <sup>1</sup> 4 108 <sup>1</sup> 4 102 <sup>1</sup> 8 102 <sup>2</sup> 6 100 <sup>2</sup> 6 100 <sup>2</sup> 6	102 <sup>1</sup> 3 106 <sup>1</sup> 2 111 <sup>1</sup> 4 97 <sup>3</sup> 3 106 <sup>1</sup> 5 110 <sup>7</sup> 4 102 <sup>5</sup> 5 102 <sup>1</sup> 4 101 101 99 <sup>1</sup> 4	******	5.44 5.95 5.94 5.96 5.94 5.96 5.73 6.24 5.80 6.35 6.31	Gerificance Lux 9½ 99 LF	107 104 1/4 104 1/2 111 1/4 102 1/4 105 5/8 107 1/4 109 5/8 112 111 1/4 103 1/2 111 1/4 103 1/2 111 1/4	104/2 104/3 111/3 102/3 105/3 110 112/2 111/3 103/4 112/4	4	7.16 5.43 6.19 6.75 7.45 6.50 5.83 6.56 7.07 6.63 7.49 6.47	Lloyds Benk P Malaysia & Co New Zastand: Alova Scotla & Ontano 0.99 State Bk Victo Sweden 0.99 Sweden -1 <sub>6</sub> Of	99	500 500 500 500 500 500 500 500	82.42 99.57 99.89 98.94 98.87 99.77 99.99 100.02 99.81	99.1 100.1 100.1 100.1 100.1 100.1	199 183 185 185 187 189	5.4 5.4 5.6 5.6 5.6 5.1
aan Dev Bit 8*g 01	1000 1000 1000 1000 1000 1000 1000 100	101 <sup>2</sup> 9 108 <sup>1</sup> 4 110 <sup>2</sup> 4 108 <sup>1</sup> 4 108 <sup>1</sup> 4 102 <sup>1</sup> 8 102 <sup>2</sup> 6 100 <sup>2</sup> 6 100 <sup>2</sup> 6	102 <sup>1</sup> 3 106 <sup>1</sup> 2 111 <sup>1</sup> 8 97 <sup>2</sup> 3 106 <sup>1</sup> 8 106 <sup>2</sup> 8 102 <sup>1</sup> 8 101 101 98 <sup>1</sup> 8 100 <sup>3</sup> 8	**********	5.44 5.95 6.33 5.94 5.85 6.04 5.85 6.24 6.35 6.35 6.37	Gerificance Lux 9 <sup>1</sup> / <sub>2</sub> 99 LF	107 1044 1045 1114 1024 1054 1054 112 1114 1031 1117 1117 1117	104/2 104/2 111/2 105/2 105/2 110 112/2 111/2 103/4 112/4 111/2		7.16 5.43 6.19 6.75 7.45 6.50 5.83 6.56 7.07 6.63 7.49 6.51	Licyds Benk F Mistaysia & Williams Hew Zeatend Nova Scotle & Ontario 0 99 State Bk Victo Sweden 199 Sweden 199 Sweden 199 CONVERTIBLE	Te 98	500 657 1000 500 500 500 500 125 1500 2000	82.42 99.67 99.89 99.84 99.87 99.77 99.99 100'02 99.81	98.4 99.4 100.4 99.4 100.0 100.0 99.1	199 183 185 180 121 17 186 187	5.4 5.4 5.2 5.6 5.6 5.1
aan Dev Bit 8*g 01 as Bace Power 8*g 03 stushita Elec 7*g 02 aren 7*g 97 aren 7*g 97 aren 7*g 97 aren 7*g 98 aren 7*g 98 abec Hydro 9*g 99 abec Hydro 9*g 99 aren 8*g 99 aren	1000 1000 1000 1000 11 300 11 300 150 150 150 150 2000 2000 1000 2000 1000 2000 2	101 <sup>2</sup> 9 108 <sup>1</sup> 4 110 <sup>2</sup> 4 108 <sup>1</sup> 4 108 <sup>1</sup> 4 102 <sup>1</sup> 8 102 <sup>2</sup> 6 100 <sup>2</sup> 6 100 <sup>2</sup> 6	102 <sup>1</sup> 3 106 <sup>1</sup> 2 111 <sup>1</sup> 4 97 <sup>3</sup> 3 106 <sup>1</sup> 5 110 <sup>7</sup> 4 102 <sup>5</sup> 5 102 <sup>1</sup> 4 101 101 99 <sup>1</sup> 4	******	5.44 5.95 6.33 5.94 5.85 6.04 5.85 6.24 6.35 6.35 6.37	Gerificance Lux 9 <sup>1</sup> / <sub>2</sub> 99 LF	107 1044 1045 1114 1024 1054 1054 112 1114 1031 1117 1117 1117	104/2 104/2 111/3 105/3 105/3 110 112/2 111/3 103/4 111/2 95/4	<b>-</b> 19	7.16 5.43 6.19 6.75 7.45 6.50 5.83 6.56 7.07 6.63 7.49 6.51	Licyds Benk F Mistaysia & Williams Hew Zeatend Nova Scotle & Ontario 0 99 State Bk Victo Sweden 199 Sweden 199 Sweden 199 CONVERTIBLE	Te 98	500 657 1000 500 500 500 500 125 1500 2000	82.42 99.67 99.89 99.84 99.87 99.77 99.99 100'02 99.81	83. 99. 100. 99. 99. 100. 100. 69. 88. 00.	199 188 185 180 121 177 188	5.6 5.6 5.6 5.6 5.6 5.1 7.0
pan Dev Br 8½ 01 rea Bec Power 8½ 03 rea Bec Power 8½ 03 reas Bec Power 8½ 03 reas Bec Power 8½ 03 reas Power 8½ 03 reas Power 8½ 03 reas Power 8½ 03 reas Power 8½ 09 reas Power 8½ 00 reasses Valley 8 00 reasses Valley 6½ 05 reas Reas Power 6½ 00 reas Reas Power 8½ 00 reasses Valley 6½ 05 reas Reas Power 6½ 00 reas Motor 5½ 05 reas Reas Power 8½ 00 reas Motor 5½ 05 reas Reas Power 8½ 00 reas Reas Reas Reas Reas Reas Reas Reas R	1000 1000 1000 1000 11 300 11 300 150 150 150 150 2000 2000 1000 2000 1000 2000 2	101 <sup>2</sup> 9 108 <sup>1</sup> 4 110 <sup>2</sup> 4 108 <sup>1</sup> 4 108 <sup>1</sup> 4 102 <sup>1</sup> 4 102 <sup>2</sup> 5 100 <sup>2</sup> 2 100 <sup>2</sup> 2 100 <sup>2</sup> 3	102 <sup>1</sup> 3 106 <sup>1</sup> 2 111 <sup>1</sup> 8 97 <sup>2</sup> 3 106 <sup>1</sup> 8 106 <sup>2</sup> 8 102 <sup>1</sup> 8 101 101 101 103 103 103 103 103 103 103	**********	5.44 5.95 6.33 5.94 5.85 6.04 5.85 6.24 6.35 6.35 6.37	Gerificance Lux 9½ 99 LF	107 1044 1045 1114 1024 1054 1054 112 1114 1031 1117 1117 1117	104/2 104/2 111/2 105/2 105/2 110 112/2 111/2 103/4 112/4 111/2		7.16 5.43 6.19 6.75 7.45 6.50 5.83 6.56 7.07 6.63 7.49 6.51 7.96 8.47	Lloyds Benk P Malaysia & Co New Zastand: Alova Scotla & Ontano 0.99 State Bk Victo Sweden 0.99 Sweden -1 <sub>6</sub> Of	ep \$ 0.10	500 650 650 650 650 650 650 650 650 650	82.42 98.67 99.69 98.84 98.87 99.77 99.99 100 02 99.61 Corec. Price 6.4 10	98.4 99.4 100.4 99.4 100.0 100.0 99.1	199 188 185 187 189 189 189 189 189 189 189 189 189 189	54 54 54 55 56 56 52 51



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#### **CURRENCIES AND MONEY**

# Dollar dawdles as markets seek fresh direction

By Philip Gawith

opments or established trends to trade off.

if anything, the D-Mark had a slightly weaker bias, but for the most part currencies stayed within their recent

helped stabilise the peseta, despite the continued weak performance of Spanish asset markets following the indecisive weekend election result. The peseta finished at Pta84.68 against the D-Mark, from Pta84.75. The lira was quable to continue its recent rally, and closed unchanged at L1,050 against the D-Mark.

Elsewhere in Europe the Swedish Riksbank cut the repo

POUND SPOT FORWARD AGAINST THE POUND

rate to 7.85 per cent, from 8.05 per cent. The krona finished marginally weaker against the

Sterling had an uneventful day, closing at DM2.2594, from DM2.2553. Against the dollar it

■ After a period of interest the D-Mark." ranges.

The dollar finished in London at DM1.4789, from DM1.4758. Against the yen it closed at Y105.125, from Y105.14.

The dollar finished in London at DM1.4789, from the pendulum appears to be swinging back again. A key element of this picture will be the release today of the German Y105.14. The slightly weaker D-Mark are braced for the worst, with unemployment data. Markets expectations of a new unadjusted record in February. Meanwhile, fourth quarter GDP figures, due tomorrow, are expected to show the econ-

omy shrinking slightly. 1.5295 1.5294 1.5265

These data will encourage Currency markets had an marginally weaker against the uneventful day yesterday in D-Mark, at SKr4.63, from is undermining the D-Mark Mr Adrian Cunningham, senior currency economist at UBS in London, said: "There is not so much independent high-yielding currency strength at the

moment as antipathy towards He said the German currency was suffering from the perception that the economy was doing worse than the government would admit.

He predicted it would be at least another three months before the market concluded that the German interest rate cycle had reached a trough.

Mr Julian Jessop, economist at HSBC Markets in London,

said it remained their view that there would be at least one more cut in interest rates. He said the most likely date for a decision would be the March 28 meeting of the Bundesbank council. History suggests the cut will be 50 basis points. Mr

1.300 -1.250 ~ 1,200 1,150

Jessop points out that 57 of the last 60 discount rate cuts, going back to 1969, have been the full half-point.

■ One factor that may well have prevented the D Mark slipping further has been the inability of the dollar to sustain its recovery.

Economists at Deutsche Morgan Grenfell in London argue

DOLLAR SPOT FORWARD AGAINST THE DOLLAR

chance of moving higher cent. The Riksbank fuelled against the D-Mark, which has weak economic data to contend with than the yen, which is supported by anticipated capithe financial year-end.

They point out that the Jusen bail-out could have a bearing on capital flows: "If the government, as is now expected, accepts a share of future bank profits in lieu of a more significant up front cash contribution, this may help to mitigate some of the concerns...that hanks would be forced to liquidate more overseas assets to cover their share of the bail out."

■ The cut in the Swedish repo rate was the fifth cut this year. fallen from 8.91 per cent.

The consensus view among economists is that the rate will fall to around 6.5 per cent by the end of the year, although there are some observers who

that the dollar has a better believe it could fall below 6 per optimism with a very bullish inflation report on Monday. Mr Malcolm Barr, economist

at Chemical Bank in London, tal flows back into Japan at said the nervousness concern ing the krona yesterday had been more to do with the road haulage strike, and fears that it might escalate, than Riks-

bank policy. He said the sedate performance of the peseta, which traded only in a 34 basis point range, was indicative of the "It takes quite a lot of news to get the markets moving." In the past, he said, the ambiguous election result could have been expected to generate much more price action.

Mar 5		£			s	
Czeck Rp	41.5331	:	41.5674	27,1920	•	
Hungary			216,990			
trae	4554.30		4582.20	3000.00		3000.00
Kunnent	0.4562	-	0.4567	0.2967		0.2989
Poland	1,9254	•	3.9303	2.5700		2.5730
Rossia	7358.50	•	7369.71	4832.00		4825 00
UAE	5 6098		5.6129	3.5728		3 6731

MONEY RA	TES							
Merch 5	cylght Over	month month	Three arths	Sb: mths	One	Lomb-	Dis.	Repo
Pelgium	3&	3&	38	34	34	7.00	3.00	
week ago	34	34	32	32	32	7.00	3.00	-
талсе	. 41	43	48	414	4%	3,90	_	5,60
week ago	43	43	41	44	48	3.90	-	5.60
Sermany -	3&	35	31/4	314	38	5.00	3,00	3,30
week ago	316	33	34	32	32	5.00	3.00	3.30
reland .	51	5%	54	5%	5jj	-	_	6.25
week ago	54	514	5%	514	52	_	_	8.25
aly	9%	956	9%	9%	914	_	9.00	9.89
week ago	104	9%	9%	934	98	_	9.00	9.72
etheriands.	34	3%	3%	314	314	_	3.00	3.30
week ago	32	34	31⁄≥	31/4	314	_	3.00	3.30
witzoriand	18	13	12	18	12	5.00	1.50	
week ego	114	12	11/2	10	130	5.00	1.50	-
3	5%	5%	58	57	5%	_	5.00	-
week ago	53	514	53	54	5%	_	5.00	_
epen	Ž.	35	22	7	4	_	0.50	-
week #go	4	3	ä	ī	4		0.50	
S LIBOR FT LO	ndon							
nterbenk Floing	-	64	514	5 <u>7.</u> 5 <u>7.</u>	54	-	-	-
week ago	-	54	54	54	5	-	-	-
S Dollar CDs	-	4.83	4.88	4.89	4.94	_	_	_
week ago	_	4.83	4.92	4.83	4.87	_	-	-
CU Linked Ds	-	4显	42	42	4월	_	-	-
week ago	-	45	44	44	4星	_	-	_
DR Linked Ds	-	3&	34	314	38	-	-	-
week ago	-	34	34	314	33	-	-	-

**EURO CURRENCY INTEREST RATES** 

Mar 5			dizys stice	One	Three months	Six months	One
Beigran Franc		- 3/2 3/2	- 38 3	号 - 3点	313 - 32	3 <u>8</u> 3 - 3 <u>2</u> 3	313 - 313
Danish Krone	418			13 . 47,	445 44	45 - 43	4월 - 4월
D-Mark				- 3/g	332 - 34	32 - 32	3 <sup>3</sup> 8 - 3 <sup>3</sup> 4
Dutch Guide			- 3 <sup>1</sup> 8 3	1 - 3 <sup>1</sup>	3.5 - 3.5	34 - 34	37. 34
French Franc				de - 4de	44 - 44	438 - 434	412 - 416
Portuguese E				8 - 712	712 73	712 - 73	733 733
Spanish Pese				^a - 8¹2	833 · 833	833 - 843	812 - 87 <u>8</u>
Sterling				6.6	616 · 6	652 - 533	64 . 6
Swiss Franc				٠ اگ <sub>ا</sub>	14 - 178	14 - 15	13 14
Can, Dollar				16 - 516	51 - 516	54 . 54	511 57
US Dollar	54			16 - 5 <sup>1</sup> 6	5 4 5 6	$5\frac{1}{4} \cdot 5\frac{1}{2}$	54 532
italian Lira				13 · B <sub>16</sub>	9.5 3.5	8,4 - 6,4	8.2 · 8.2
Yen	· ·			<u> </u>	ie . 1	2 - 2	34 - 5 <sub>8</sub>
Asian SSing	1,76			2 - 179	21 21	24 - 24	24 278
Short term rate	ss on call CONTH (	tor the US D	other and Y	en, others: ATIF) Paris	two days' no Interbank (	tice, offered rate (	FFr5m)
	Open	Sett price	Change	High	Low	Est. vol	Open Int.
Mar	95.68	95.66	+0.04	95.66	95.62	19,408	45,037
Jun	95.68	95.66	+0.02	95.71	95.63	15,939	59,486
Sep	95.66	95.66	+0.04	95.71	95.63	5,324	48,529
= THREE	MINOR I	EUROMARI	C FUTURI	ES (LIFFE)	DM1m po	ints of 100%	
	Open	Sett price	Change	High	Low	Est, vol	Open int.
Mar	95.70	96.68	-O.D1	96.71	96.66	20110	140425
Jun	96.84	96.81	-0.01	96.85	96.77	44513	204750
Sep	96.78	96.71	-0.03	96.77	96.68	52736	197035

	Open	Sett price	Change	High	Low	Est, vol	Open in
Mar	95.68	95.66	+0.04	95.66	95.62	19,408	45.03
Jun	95.68	95.66	+0.02	95.71	95.63	15,939	59,480
Sep	95.68	95.66	+0.04	95.71	95.83	5,324	48,529
= THRE	E MONTH	EUROMARK	FUTURE	s (LIFFE)"	DM1m poli	ts of 100%	
	Open	Sett price	Change	High	Low	Est, vol	Open la
Mar	95.70	96.68	-O.D1	96.71	96.66	20110	14042
Jen	96.84	96.81	-0.01	96.85	96.77	44513	20475
Sep	96.78	96.71	-0.03	96.77	96.68	52736	19703
Dec	95.52	96.48	-0,02	96.55	98,45	53141	16412
S THRE	E MONTH	EUROLIKA	FUTURES	(LIFFE)" L	000m potr	to of 100%	
	Open	Sett price	Change	High	Low	Est. vol	Open is
Mar	90.50	90.42		90.50	90.40	3832	33231
Jen -	81.10	90.98	-0.06	91,17	90,97	13721	33847
Sep	91,48	81.29	-0,10	81,49	81.25	3279	19308
Dec	81.48	81.36	-0.08	81,54	91.36	1354	19781
S THRE	ESOME	EURO SWIS	S FRANC	FUTURES	(LIFFE) SI	rim points	of 100%
	Ореп	Sett price	Change	High	Low	Est, vol	Open k
Mar	98.30	98.25	-0.03	98.30	98,18	4759	19176
Jun	98.25	98.19	-0.05	98.26	96.18	8754	20570
Sep	98.10	98.03	-0.06	98.15	98.00	3063	11733
Dec	87,88	97.77	-0.06	97.88	97,77	979	8249
H THERE	E MONTH	ECU FUTUR	NES (LIFFE)	Ecurim po	ints of 100	94	
	Open	Sett price	Change	High	Low	Est. vol	Open l
Mac	95.44	25,41	+0.01	95.44	95,36	423	8758
Jun	95.50	95.52	-0.02	95,59	95,52	886	5407
Sep	95,51	95,46	-0.01	95.51	85,48	327	3225
Dec	95.32	95.28		95.33	95.28	168	3229
· LIFFE W	tures also trad	led on APT					
-	A WOA OPTS	ONS (LIFFE)	11000mm	John of 164	naz.		

0.05 0.18 0.35

0.15 0.20 0.27

0.22

Europe													
Austria	(Sch)	15.8883	+0.0282	804 - 961	15,9118	15.8701	15,8583	2.3	15.7758	2.6	_		105.8
Belgium	(BFri)	46,4375	+0.0871			46.2800	46.3325	2.7	46.1325	2.6	45,2725	2.5	109.1
Denmark,	(DKd)	8.7281	+0.0158		6.7386		6,7161	1.9	6.696	1.5	8.5899		
Finland	(FM)	7.0117	+0.0254		7,0250		7.0073	0.9	6.9982	0.7	0.3033	1.8	109.1 B4.0
France	(FFr)	7.7395	+0.0088		7.7548		7.7273	1.9	7.7083		7.6288		109.3
Germany	(DM)	2.2504	+0.0041		2.2640		2.2533	3.2	2,2444	1.6 2.7	2.2015	1.4	
Greece	(Dr)	368,654	-0.735			368.294	2230	0-2	2,2777	2.1	22015	2.6	110,1
treland	020	0.9729	+0.0017		0.9740		0.9716	12	0.9705	1.0	0.9665		66.4
Italy	T.	2372.02	+3.75			2384.24	2379.57	-3.8	2395,22	-3.8	2454.07	0.7 -3.5	97.9
Cruodinaul	(LFO	46,4375	+0.0871			48.2600	48.3325	2.7	48.1325		45.2725		74.5
Nothedands	(Fi)	- 2.5295	+0.0058		2.5334		2.5234	2.9	2.5112	2.6		2.5	108.1
Norway	(NKr)	e.8350	+0.0147		9.8887		9.827			2.9	2.463	2.6	108.2
Portugal	(Ea)	234,449	+0.176			234,278		1.0	8.8136	0.8	8.7549	0.8	98.9
Spain	(Pta)	191.313	+0.189				234,874	-2.2	235.779	-2.3			95.1
Sweden	(SK4)	10,4597	+0.0257			190.681	191,733	-2.8	192.588	-2.7	195.668	-2.3	81.3
Switzerland	(SFr)	1.8365		526 - 667 355 - 574		10.3610	10,4611	-0.2	10.4841	-0.2	10.4725	-0.1	66-2
UK :			+0.0004	350 - 374	1.8399	1.8338	1.8299	4.3	1,8166	4,3	1.764 <del>9</del>	3.9	113.7
Ecu	(22)		4 224										83.6
SDRt	_	1.2163	-0.0015	158 - 1 <del>6</del> 8	1.2177	1-2147	1.2149	1.4	1.2122	1.3	1,2003	1.3	-
	_	1.04366	-	-	-			•		-		-	
Americas				<u> </u>									
	Peso)	1.5276	-0.0003		1.5290	1,5257	-	-		•		-	
Brazil	(17(5)	1.5022		018 - 027	1.5034	1.5001				-	-		
Canada	(CS)	2.0942	-0.0015		2,0960		2,0925	0.9	2.0898	0.8	2.0799	0.7	83.9
Mexico (New I	Peso)	11.5842		777 - 906		11,5541			-				
USA ·	(3)	1,5278	-0.0004	274 - 281	1.5292	1,5259	1.5266	9.0	1.525	0.7	1.5162	0.8	95.8
Pacific/Middle	East/A	drice											
metralia	(AS)	2.0111	-0.0004	100 - 122	2.0170	2.0096	2.013	-1.1	2.0176	-1.3	2.0411	-1,5	68,7
Hong Kong	(HKS)	11.8123	-0.003	068 - 157	11,8230	11,7987	11,8018	1.1	11,7895	0.8	11.7445	0.8	
ndla	(Fla)	51,6609	-0.7641	261 - 956	52,2780	51,6220	_	-			-	-	
erael	Shlo	4.7443	+0.0013	395 - 490	4.7492	4.7392		-	-	-	-		-
Janan	· (Y)	160,605	-0.07	.530 - 680	161,080	160,330	159.84	5,7	158.36	5.8	152,455	5.1	138.4
Valaysia	(MS)	3.8859	-0.0049	B42 - 875	3.8903	3.8838				_			-
	(NZS)	2,2625	-0.0074	611 - 638	. 2.2701	2.2580	2.2663	-2,0	2.2795	-30	2,3133	-2.2	105,7
	Peso)	40,0042	+0.0112	797 - 288	40.0290	39.9710							
Seudi Arabia	(SR)	.5,7295	-0.002	279 - 311	5.7347	5,7229	_	-	-	-			
Singapore	(SSI	2.1586	-0.0018	552 - 577	2.1585	2.1550		_		_		_	_
South Africa	(FI)	5.9182	-0.0438	110 - 214	6,0615	5.9095							_
	Won	1190.50		015 - 085	1191.55								
Calwert (	(192)	42,0101		988 - 212	42,0484			-					
	(Bt)	38,4993					_						
halland		30.4333	-0.0144	752 - 234	38.5240	30.4030		-	-	-		•	

Mar 5		Closing mid-point	Change on day	Bid/offer apreed	Dey's high	low	One mo	onth %PA	Three sad	MiPA	One y	%PA	I.P Mon
Europe												.,	J 1442
Austria	(Sch)	10.3998	+0.0215	970 - 025	10.4210	10.3900	10.3838	1.6	10.3523	1.8	10,2298	1.6	105
Belgium	(BFr)	30.3960		890 - 030		30.2870	30.351	1.8	30.259	1.8	29.926		107
Denmerk	(DKr)	5.7131		116 - 145	5.7206		5,7097	0.7	5.7041	0.5	5.7206		100
Finland	(FM)	4.5896	+0.018		4.6010		4.5851	1.2	4.5766	1.1	4.5601	0.8	83
France	(FFr)	5.0660		652 - 667	5,0780		5.0619	1.0	5.0563	0.6	5.042		108
Germany	(DM)	1,4789		785 - 792	1.4825		1,4768	1.7	1.4723	1.8	1.4556		109
Greece	(104)	241.305		250 - 360		241.030	242.88	-7.8	245.13	-80	280 805		65
reland	œ	1.5703		695 - 711	1.5720	1.5675	1.5706	-0.2	1.5708	-0.1	1.5648	0:4	-
Italy	ii.	1552.62	+2.91	199 - 325		1548.10	1558.97	-4.9	1570.72	-4.7	1621.62		74
Luxembourg	(LFr)	30.3960		890 - 030		30,2870	30.344	2.1	30.256	1.8	29.951	1.5	107
Netherlanda	ŒĠ	1,6557		552 - 561	1.6598		1,6526	2.2	7.6462	2.3	1.624	1.9	107
Norway	NKO	6.4378		338 - 413	6.4810	6.4071	6.4353	0.4	6.4271	0.7	8.4101	0.4	96
Portugal	(Es)	153,460		390 - 530		153,340	153.835	-2.9	154,605	-3.0	158.21	-3.1	95
Spain	(Pts)	125,225		200 - 250		124,930	125.62	-3.B	126.355	-3.8	129.845		91
Sweden	(SKI)	6.8465		434 - 495	8.8608		8.8636	-30	6.893	-2.7	7.0305		85
Switzerland	(SFr)	1.2021		017 - 024	1,2050	1.2013	1.1985	3.6	1.1918	35	1.1678		113
UK	(E)	1.5278		274 - 281	1.5292	1.5259	1.5266	0.6	1.525	0.7	1.5162	0.8	83
Ecu .	1-4	1.2581		558 - 583	1,2582	1.2531	1.2564	-0.3	1.2568	-0.2	1.2574	-0.1	- 50
SDR†	-	0.68267			.,			-0.0	12300	-7.2.		-43.1	
Americas		0.0000	. 0 000-	***	4 4055								
	(Peso)	0.9999		998 - 000	1.0000	0,0998	-			-		-	
Brazil	(F8\$)	0.9833			0.9836	0.9830						.:	
Canada	(CS)	1.3708		705 - 710	1,3720	1.3684	1.371	-0.1	1,3711	-0.1	1.3761	-0.4	82
	Peso)	7.5825	+0.0125	800 - 850	7,5870	7.5800	7.5847	-0.4	7.5879	-0.3	7.5928	<b>~0.</b> 1	
JSA	(\$)			-		-			-	•			96
Pacific/Middle													
australia .	(A\$)	1,3163		160 - 168	1.3190	1.3160	1,3183	-1.8	1,3218	-1.7	1,3405	-1,8	89
long Kong	(HK\$)	7.7318		313 - 323	7,7323	7.7310	7.7325	-0.1	7.7343	-0,1	7.7613	-0.4	
ndia	(As)	33.8150		000 - 300	34.2400		33,965	-5.3	34.27	-6.4	35.74	-6.7	
sree!	(Shk)	6.1054		030 - 078	3,1080							-	
lapan	M.	105,125		100 - 150	105,490		104,66	5.0	103.89	4.7	100.82	4.1	138
<b>Malaysia</b>	(MS)	2.5435		430 - 440	2.5485	2.5427	2.5444	-0.4	2.5505	-1.1	2,574	-1-2	
New Zealand	(NZ3)	1,4806		804 - 815	1,4845	1,4798	1,4839	-2.5	1,4897	-2.4	1,5143	-2.3	
Philippines	(Peso)	26,1950		750 - 950	26,1950	26,1750							
Saucii Arabia	(SFI)	3.7503	-0.0002	501 - 505	3.7505	3,7500	3,7508	-0.1	3,7515	-0.1	3,7548	-0.1	
Singapore	(55)	1.4115	-0.0008	110 - 120	1,4142	1.4110	1.408	3.0	1,402	2.7	1.3765	2.5	
South Africa	(R)	3,8725	-0.0275	700 - 750	3.9680	3.8700	3,9013	-8.9	3.9527	-8.3	4.178	-7.8	
South Korea	(Won)	779.250	-0.35	200 - 300	779,800	778.900	792,25	-4.6	785.75	-3.3	804.25	-3.2	
priwan	(TS)	27,4990		970 - 990	27,5000	27 4970	27.518	-0.9	27.558	-0.9			
hailand	(Bt)	25,2000		900 - 100		25.1900	25,2987	-4.7	25,5025	-4.8	26.385	-4.7	
SDR rate per 5	for Mar	4. Bid/offer	spreads in t	he Dollar Spot	table show	only the	ast three d	ecimal )	olaces, Form	and mile	s are not	directly t	

CROSS	RAILE	ANI	UER	ANTIV				_						_				
EXCHAI			RATES							_								
Maz	6	BFr	DKr	FFr	DM	. 112	L	R	NKr	Eş	Pta	2Kr	SFr	3	C\$		Y	5cu
Belglum	(BFr)	100	18.79		4.864	2.095	5108	5.448	21.18	504.7	411.9	22.52	3.956	2.153	4.509	3.290	345.8	2.618
Donmark	(DKr)	53.21	10	8.868	2.588	1.115	271a	2.899	11.27	266.6	219.2	11.98	2.105	1.148	2.399	1.751	184.0	1.393
France .	(FFr)	60.00	. 11.28	10	2.918	1.257	3065	3.269	12.71	302.8	247.2	13.51	2.373	1_292	2.705	1.974	207.5	1.571
Gormony	(DM)	20.56	3.864	3.426	. 1	0.431	1050	1.120	4.354	103.8	84.68	4.630	0.813	0.443	0.927	0.676	71.09	0.538
reland.	(21)	47.73	8.970		2.322	1	2438	2.600	10.11	240.9	196.6	10.75	1.888	1.028	2.152	1.570	165.1	1.250
lady	C	1,958	0.368		0.095	0.041	100.	0.107	0.415	9.882	8.065	0.441	0.077	0.042	880.0	0.064	6.771	0.051
Notherlands	(FI)	18.36	3.450		0.893	0.385	937.5		3.887	<b>82.65</b>	75.81	4,134	0.726	0.395	0.828	0.604	63.48	0.481
Horway	(NKr)	47.22	8.874		2.297	0.989	2412	2.572	10	238.3	194.5	10.64	1.888	1.017	2.129	1.554	163.3	1.236
Portugal	(Ea)	18.81	3.724	3.302	0.964	0.415	1012	1.078	4.196	100.	81,61	4.462	0.784	0.427	0.893	0.652	68.52	0.518
Spain	(Pta)	24.28	4.562	4.046	1.181	0.509	1240	1.323	5.141	122.5	100.	5.468	0.960	0.523	1.085	0.799	83.95	0.636
Sweden	(SIG)	44.40	8.344		2.160	0.930		2.418	9.402	224.1	182.9	10	1.758	0,956	2.002	1.461	153.5	1.163
Switzerland	(SFr)	25.2B	4.751.	4.213	1.230	0.530	1291	1.377	5.354	127.6	104.1	5.694	1	0.544	1.140	0.832	87.43	0.662
JK ·	(2)	46.44	8.728		2.259	0.973	2372	2.530	9.835	234.4	181.3	10.46	1.837	1	2.094	1.528	160.6	1,218
Canada	(CS)	22.18	4.168		1.079	0.465	1133	1.208	4.697	111.9	91,36	4.995	0.877	0.476	1	0.730	76.70	0.581
18	(3)	30.39	5.712		1,478	0.637	1552	1.656	6.437	153.4	125.2	6.646	1.202	0.654	1.370	1	105,1	0.796
lapan	M	28.92	5.435	4.819	1.407	0.606	1477	1.575	6.124	148.0	119.1	6.513	1.144	0.623	1,304	0.851	100.	0.757
		36.18	7.178	8.365	1.858	0.800	1951	. 2.061	8.088	192.8	157.3	8.602	1,511	0.622	1.722	1.257	132.1	1
Danish Kronov.	French Fran	, Narweg	dan Kroner,	and Swedit	h Krono	per 10:	Belgian Fr	anc, Yen, Es	cudo, Lina	und Pese	ta per 100							
D MARK	SITURES.	MANA D	м 125.000	per DM					. <b></b> .	PARES	E YEN P	UTURES	(IMM) Yen	12.5 per	Yen 100			
		Latest	Change	High	L	OW	Est. vol	Open Int.	_		Open	Latest	Change	High	L	ow E	Esst. Vol.	Open In
	Open			0.6772		752	17,340	65,181	Mar		0.9524	0.8531	+0.0027	0.954	7 09	496	14.926	54,986
lar .	0.8770	0.6757	-0.0018 -0.0017	0.6803		799	3,568	8,395	Jun		0.9622	0.9640	+0.0027	0.965			6,507	13,829
Jun .	0.6800	0.9788		0.6830		830	57	1,700	Sec		_	0,9718	-				42	929
Sep .	0.6830	0.6830	_0,0008															

un Sep	0.8400	0.8381 0.8485	-0.0002 +0.0012	0.8403	0.8363 0.8455	3.222	5,918 295
٠.							
uk i	NTERES	T RATE	ES	-			
OND	ON MO	NEY RA	TES	•	_		
<b>Ler</b> 5		Over- night	7 days notice	One month	Three months	Six months	One .
nterbank	Steding	7 - 5 <sup>5</sup> 8	67 - 67	816 - 614	6 <sup>1</sup> 8 - 6	6/6 - 5/2 8 - 5/2	612 - 512
terling C			-	64 64	618 - 6	9. 26	032 - 032
reasury !	Has	-	-	6 g - 616	5월 - 5월 5월 - 5월	583 · 583	
Same Cities				6 <sup>1</sup> g - 5 <sup>1</sup> g	61a - 61a	64 - 513	814 512
and make	hority deps. Market deps	7 84	612 · 613	6 <sup>1</sup> 4 6 <sup>1</sup> 8	- 0/2	016 - 019	
	ng bank base	landing rate	64 per ce	ent from Jes	nuary 18, 19	96	
W CHESTON	M Name of Page		Up to 1	1-3			9-12
			month	. month	monthe	months	months
		D 6000	250	5l <sub>2</sub>	5	5	434
	Fax dep. (£10 ox dep. under £		one. Deposit	withdrawn	for cash 14p	G.	E-b 00
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arch 1, 1	996 E MONTH S	THE DIG	FUTURES	(LIFFE) 55	00,000 poin	ts of 100%	
		Sett price		High	Low		- pp
	Ореп	93.94	-0.01	93.96	93.92	10057	63037
ler .	93.96		-0.02	94.18	94.10	27241	69452
LIN .	94.17	94.14	-0.01	94.16	94.07	19850	52272
<b>e</b> D	94.15	94.11	-0,01	93.96	93.85	9659	44603
ec	<b>93.9</b> 5	99.90	-0.02	93.65	93.53	2014	31915
	93.63	93.58	-U.DZ				
no wade	93.63 d on APT. All	Open interest	909" WA 1/1	hornes or	*.		
					into of 1004	16	
SHOP	T STERLE	O OPTION	B (LIFFE) S	SULULU PO			
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·					Mor	.km	-

Strike Price 9375 9400 9425 Est. vol. 102	Mer 0.20 0.03 0 al, Callo 8123 Fuss	Jun 0.44 0.25 0.11 2843. Previo	Sep 0.53 0.35 0.23 0.23 us dwy'e open	Mer 0.01 0.09 0.31 int. Cells 10	Jun 0,05 0,11 0,22 81460 Puls 163	Sep 0.17 0.25 0.37 350
Alled Tru Alle Bank OHerry An	Company	5 Duncar 5 Exeter 5 Financi 5 @Robert 5 Girober	Benk Limited of & Gen Bark Florring & Conk	% - 6.25 - 7.25 - 4.7.00 - 8.25 - 6.25	Royal Ek of Sox Singer & Fried Smith & William ISB United Bank of	ender 6.25 n Secs. 6.25 6.25 Kuwał. 6.25 k Pic 6.25
Banco Bil Bank of C Bank of it Bank of it Bank of S Banckays Bat Bik of Carpan Sh	Ban Vacaya. 6.2 Sypras 6.2 Sypras 6.2 Sotiand 6.2 Sotiand 6.2 Perk 6.2 Mid East 6.2 Syria 6.2 Mid East 6.2 Syria 6.2 Mid East 6.2	5 Hebbs 5 OHembre 6 Heritab 6 OHEM Sar 5 C. Hom 6 Hongle 5 Hongle 7 Julien 1	Sank AG Zuric os Bank	6.25 6.25 6.25 6.25 6.625 6.625 6.25	Western Trust Whiteway Lake Yorkshire Bank Members of L Investment Bi Association In administration	mar 6.25 6.25 andon anlong

### STERLING FUTURIES (IMM) \$82,500 per 2    Mar	- JAPANE	SE YEN F	TURES.		12300			
Mar							Feet work	One
Sep								
### STERRISMO FUTURIES (MM) 262,500 per E  Miler		0.8024		+0.002	0.0053		R 507	13.8
Mar 1,5256 1,5272 +0.0008 1,5278 1,5252 6,557 89,	JUN Com	0.3022		70.002	1 113000	0.3011		925
Mer 1,5256 1,5272 +0.0008 1,5278 1,5252 8,557 89, Jun 1,5232 1,5240 +0.0002 1,5250 1,5232 2,834 12, Sep 1,5232 1,5240 +0.0002 1,5250 1,5210 6 1 1,5232 1,5240 +0.0002 1,5250 1,5210 6 1 1,5232 1,5240 1,5250 1,5210 6 1 1,5232 1,5240 1,5250 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1 1,5232 1,5210 6 1	ОФР		4,417			_	_	-
Sep	E STERLIN	IQ FUTUR	ES (IMM)	£62,500 p	per 2			
Sep	Mar	1.5256	1.5272	+0.000	8 1.5278	1.5252	6,557	89,9
Section	Jun			+0.000	1.6250	1.5232	2,634	12,5
Mer 5   Ecu cen. rates   Rate   Change   % +/- from   % spread on day   cen. rate   weakest   xel. rates   xe	Sep	-	1,5220	-	1.5220	1.5210	8	15
Natherlands								
Speils   162.483   160.544   +0.086   -1.20   4.12     Belgium   39.3960   38.9328   +0.0544   -1.16   4.09     Austria   13.4383   13.3302   +0.02   -0.88   3.78     Germany   1.91007   1.89409   +0.00288   -0.84   3.74     Denmank   7.26580   7.37742   +0.01174   0.43   2.43     Portagal   195.792   196.880   +0.188   0.45   2.41     Prinance   6.40606   8.49867   -0.00228   1.31   1.54     France   6.40606   8.49867   -0.00228   1.31   1.54     Insight   0.782214   0.814657   -0.00044   2.87   0.00     NON ERM MEMBERS     Greece   292.957   306.968   -1.111   5.50   -2.49     Italy   2106.15   1984.12   -15.93   -5.79   6.20     UK   0.78655   0.836170   -0.00127   6.55   -3.45     Esu central ratios set by the European Commonton. Currencies are in descending relative strength Percentage charges are for Ecut a positive change denotes a vesial currency. Divergence shows 1     Every Commonton   1.00127   6.55   -3.45     Esu central ratios set by the Buropean Commonton. Currencies are in descending relative strength Percentage charges are for Ecut a positive change denotes a vesial currency. Divergence shows 1     Every Commonton   1.00127   6.55   -3.45     Esu central ratios set by the Buropean Commonton   2.00127   6.55   -3.45     Esu central ratios and palien Lire auspended from EPM. Adjustment currency becaused by the Financial Triangle of a currency, and the machinum permitted percentage deviation of the currency's market rate for a currency and palien Lire auspended from EPM. Adjustment calculated by the Financial Triangle   1.500   0.35   0.88   1.50   0.89   0.99   0.35   0.88   1.80   0.35   0.89   0.35   0.99   0.35   0.99   0.35   0.99   0.35   0.99   0.35   0.99	Mer 5						% spre v weak	ad D
Speils   162.483   160.544   +0.086   -1.20   4.12     Belgium   39.3960   38.9328   +0.0544   -1.16   4.09     Austria   13.4383   13.3302   +0.02   -0.88   3.78     Germany   1.91007   1.89409   +0.00288   -0.84   3.74     Denmank   7.26580   7.37742   +0.01174   0.43   2.43     Portagal   195.792   196.880   +0.188   0.45   2.41     Prinance   6.40606   8.49867   -0.00228   1.31   1.54     France   6.40606   8.49867   -0.00228   1.31   1.54     Insight   0.782214   0.814657   -0.00044   2.87   0.00     NON ERM MEMBERS     Greece   292.957   306.968   -1.111   5.50   -2.49     Italy   2106.15   1984.12   -15.93   -5.79   6.20     UK   0.78655   0.836170   -0.00127   6.55   -3.45     Esu central ratios set by the European Commonton. Currencies are in descending relative strength Percentage charges are for Ecut a positive change denotes a vesial currency. Divergence shows 1     Every Commonton   1.00127   6.55   -3.45     Esu central ratios set by the Buropean Commonton. Currencies are in descending relative strength Percentage charges are for Ecut a positive change denotes a vesial currency. Divergence shows 1     Every Commonton   1.00127   6.55   -3.45     Esu central ratios set by the Buropean Commonton   2.00127   6.55   -3.45     Esu central ratios and palien Lire auspended from EPM. Adjustment currency becaused by the Financial Triangle of a currency, and the machinum permitted percentage deviation of the currency's market rate for a currency and palien Lire auspended from EPM. Adjustment calculated by the Financial Triangle   1.500   0.35   0.88   1.50   0.89   0.99   0.35   0.88   1.80   0.35   0.89   0.35   0.99   0.35   0.99   0.35   0.99   0.35   0.99   0.35   0.99	Natherlands		14 2	12066	+0.00331	-1.46		1
Selegham   39.3960   38.9328   +0.0544   -1.16   4.09     Austria   13.4383   13.3302   +0.02   -0.88   3.78     Austria   13.4383   13.3302   +0.02   -0.88   3.78     Serrimany   1.91007   1.89409   +0.00288   -0.84   3.74     Denminank   7.26580   7.31742   +0.01174   0.43   2.43     Portsigal   195.792   196.890   +0.188   0.45   2.41     Portsigal   195.792   196.890   +0.188   0.45   2.41     Prance		162.4	93 1	60.544	+0.086			
Austrian 13.4383 13.3202 +0.02 -0.88 3.78 Germany 1.91007 1.89409 +0.00288 -0.84 3.74 Destroaris 7.26580 7.31742 +0.01174 0.43 2.43 Portogal 195.792 196.890 +0.188 0.45 2.41 Prance 6.40606 6.49697 -0.00228 1.31 1.54 - Irraland 0.782214 0.814957 -0.00244 2.87 0.00 -  NON EPM MEMBERS Greece 292.857 306.966 -1.111 5.50 -2.49 Italy 2106.15 1984.12 -15.93 -5.79 6.20 UK 0.786552 0.836170 -0.00127 6.55 -3.45 Esu central rates set by the European Commoston. Currencias are in descending relative strength or a currency, and the maximum permitted percentage deviation of the currency market rate for a currency, and the maximum permitted percentage deviation of the currency's market rate for a currency, and the maximum permitted percentage deviation of the currency's market rate for a currency and stellan Lira auspended from EPM. Adjustment calculated by the Financial Tellan Strike	Belgium	39.39	60 3		+0.0544		4,09	
Sermanny   1.91007   1.89408   +0.00288   -0.84   3.74		13.43	<b>83</b> 1	3,3202	+0.02			1
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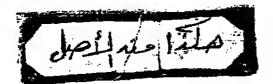
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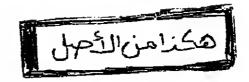
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#### LONDON STOCK EXCHANGE

MARKET REPORT

## Sell programmes and US news upsets equities

By Steve Thompson UK Stock Market Editor

The effect of some strong US economic news, plus a series of programme trades, said to have heen weighted on the sell side, combined fo choke off what had heen an exceptionally strong opening performance by UK equities.

The had news came after the UK market's main indices had moved up to new all-time records on the back of strong hopes that domestic interest rates will be lowered after Mr Kenneth Clarke, the chancellor of the exchequer, meets Mr Eddie George, the governor of the Bank of England, on Thursday.

manfully after an unhappy start, the FT-SE 100 index ended a husy trading session a oet 8.5 higher at 3,777.1, well short of its previous closing high, 3,781.3, reached oo February 2. The index did, however, record a new all-time intra-day high of 3,792.5.

The FT-SE Actuaries All-Share index reached another new record closing 5.76 up at 1,864.59. And the FT-SE Mid 250 index gave another power-packed performance, racing up to finish 27.3 higher at a record close of 4.272.2. The driving forces behind the

Mid's showing came from yet another stunning performance from

British Biotech, and from numerous hid targets. Of these NYNEX, the cable television group, jumped almost 6 per cent.

A 0.5 per cenf rise in US factory goods orders, which compared with a consensus forecast of a 0.5 per cent fall, did the damage in US honds, which fell around threequarters of e point in early New York trading.

With bonds pressured, US equities struggled and the Dow Jones Industrial Average was down 20 points shortly after the start, before stabilising and moving into positive ground after London closed.

Earlier, UK stocks had made rapid progress, hasking in the

cancer treatment.

Biotech shares responded

positively to the company's

announcement that it is

expanding trials on its mari-

mastat drug and will announce

further results in May. The

market also reacted positively to news that the company's

lexipafant drug began a Phase III trial in the US in patients

with acute pancreatitis. The

Oil stocks came under pres-

sure as unease grew over the possible acceptance by Iraq of

United Nations conditions for

Potential extra supply would

be negative for a market

already likely to be oversuppl-

ied in 1996 and there were addi-

tional worries about Monday's

news that OPEC is producing

1.5m barrels above its self-im-

Thirdly, Algeria and Vene-

zuela want to increase produc-

shares jumped 272 to 2320p.

limited oil sales.

posed ceiling.

night 63-point upsurge.

A flurry of institutional huying. promoted by the interest rate optimism and takeover hopes, hulldozed Footsie to its new record, with the second liners tagging along before taking off in their own right.

But with the bond markets starting to flag, the sell programmes hegan to hite into the market's confidence. From its record. Footsie retreated to a session low of 3,771.9, only 3.3 up. before steadying with Wall Street.

Manchester United's victory over
table-topping Newcastle United

threw the Premier League championship wide open again and saw the

on Shell to neutral from out-

East Midlands Electricity

improved 5 to 615p with the

underperformed the market.

The broker was also recom-

mending Yorkshire Water on

the hasis that yesterday's

announcement of a coovertible

buy-back makes a subsequent

share huy-hack increasingly

could comfortably repurchase

the US computer price wars

washed over on to electronics

group Amstrad and circuit sol-

ker in the FT-SE Mid 250 index,

tumbling more than 3 per cenf

which puts out annual results

tomorrow, came off 5 to 312p.
Among conglomerates, Har-

risons and Crosfield continued

to gain ground on hopes for a

demerger, adding 8 to 172p for

a two-day advance of 10.

closed 7 higher at 650p.

der specialist Cookson. Amstrad ended as hackmar-

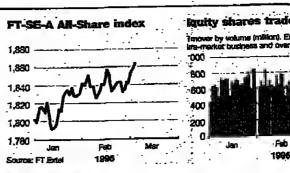
likely.

reflected glory of Wall Street's over- former's shares climb 13 to an all-time high of 280p; bookmakers installed United as the new favourites to take the league title.

BAA and British Airways took the honours in the FT-SE 100 performance table, with both stocks up over 3 per cent, the former after a spate of broker buy recommendations and the latter after excellent February traffic oumbers.

On the downside, the hig oil stocks shuddered amid talk that Iraq may sell up to \$2bn-worth of oil on world markets. Boosted by the programme trade

activity, turnover in equities expanded to 863m shares. Retail husiness on Monday was valued at £1.47bn.



Indices and ratios	ł .	
FT-SE 100	3777,1	+8.5
FT-SE Mid 250	4272.2	+27.3
FT-SE-A 350	1889.0	+5.9
FT-SE-A All-Share	1864.59	+S.76
FT-SE-A AR-Share yield	3.74	(3.75)
Best performing s	ectors	
1 Transport		., +2.1
2 Electronic & Elec		+1.2

Mineral Extraction Household Goods

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### **BA** beats traffic forecasts

Transport leaders scooped the Footsie pool with airports group BAA and British Airways turning in the day's two

BA's humper traffic returns for February took analysts totally by surprise and there were suggestions yesterday that a number of fingers were beginning to tighten around upgrade triggers.

The airlice's traffic flows jumped 13.4 per cent, running counter to concerns about severe weather and the impact of the end to the IRA ceasefire. The consensus expectation among City transport teams was probably 7 per ceot

The extra day, as a result of Leap year, was said to have accounted for some three percentage points of the upturn but even so the numbers were impressive, and included very strong premium traffic husi-

BA shares jumped 17 to 534p to run BAA, which shot forward 18 to 516p in turnover of 8.6m. a close secood in the Footsie rankings.

BAA has been a dull performer lately, lagging the markef hy I per ceof sioce fhe start of the year. A number of huv notes are known to be in circulation, and the company has recently been meeting with

P&0 stayed in demand in spite of stories linking the

group's name with the Cunard line, said to be up for sale following the agreed bid from Kvaerner of Norway for Cunard's parent company, Trafalgar House. The shares put on 5

Construction group Amec, in which Kvaerner has a 26 per cent stake, fell 4 to 95p on revived worries that the Kvaerner bolding was about to be placed in London.

#### Aliders promoted

Following the hid hy Uni-Chem for Lloyds Chemists. retail specialists are scrabbling around to identify the next hid

in the sector. Mr Mark Josefson, of Panmure Gordon, has identified Allders as a possible candidate. after examining three criteria that might well come under the scrutiny of a predator.

He has discovered that Allders is the only company in the sector that meets all of his crihighest p/e discounts to the market, one of the five most significant Enterprise Value ratios (a measure hased on cashflow) and one of the five highest asset values compared to its share price.

Finally, he believes the com pany splits very cleanly between the department store arm and the international duty free arm - which could attract the attention of airlines such as Cathay Pacific and SAS, The shares were a penny easier af

Kingfisher, the group that owns Woolworths in the UK jumped 14 to 534p after Par mure Gordon featured the com pany as its key buy in the see

#### Tarmac dips

News that Ministry of Defence police had raided its Wolverhampton offices pushed aggregates group Tarmac sharply lower in heavy volthe shares closed off 3 at 119p The shares have outpaced the market hy 26 per cent over the past three months and turnover yesterday surged to

explanatory statement from the company, which did not best please the City. "There is nothing marketmakers like less than uncertainty", said one leading analyst.

A top broker huy note helped push up Gleeson (M.J.) for the second day running. The shares jumped 58 to 803p.

British Biotech rose sharply in very thin volume after the company announced encourag-

#### ing third quarter results and FINANCIAL TIMES EQUITY INDICES

	Mar 5	Mar 4	Mar 1	Feb 29	Feb 28	Yr ago	7-Egh	Low
Ordinary Store	2807.9	2791,3	2775.5	2756.4	2758.2	2277.6	2807.9	2238.3
Ord, div. yield	3.82	3.84	3.86	3.88	3.88	4.62	4.73	3.76
P/E ratio net	17.08	18.98	16.88	18.76	16.80	15.32	21,33	15.35
P/E ratio nil	16.85	16.75	18.65	16.56	16.58	15.88	22.21	15.17
"For 1996/96, Order Date: 1/7/35.	ary Share	Index since	compts	den: high	2807.8 54	03/98; low	49.4 25.76	MC. Base
Ordinani Sham								

Ordinary Share hourty						
Open 9.00 10.0	11.00	12.00 13.0	14.00	15.00 1	8.00 High	Low
2812.0 2807.9 2812.	3 2809.4 2	2006,2 2908,5	2803.0	2803.8 280	07.2 2818.1	2802.7
	Mar 5	Mar 4	Mar 1	Feb 29	Feb 28	Yr ago
SEAO bergains	37,290	36,845	33,405	31,428	32,378	29,486
Southy turnover (Emit		1471.5	1665 8	1699,6	1824.2	2029.0
Equity bergainst		44,782	32,437	38,322	37,587	40,198
Shares traded (milit		601,4	643.3	614.6	640.0	711.7
tExclusions intra-market but	-	-	_			

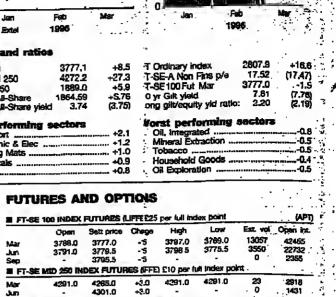
Rises and talls'		52 Week highs	and fores	LIFFE Equity option	HEER .
Total Rises	773	Total Highs	165	Total contracts	35,725
Total Falls	484	Total Lows	20	Calls	20,108
Same	1,555			Puts	15,617
Mar. 5 "Data besed	on Equi	ty shares listed on	the Landa	n Share Service.	•

tion in respect of OPEC quotas. BP slipped 31/4 to 543p and Rumours of corporate activ-Shell Transport 91/4 to 8431/4p. ity continued to buoy cable TV shares. Nynex CableComms On Monday, Lehman Brothers lowered its recommendation on added 6 to 111p. while TeleWfour international oil compaest Communications gained 4 fo 140p, with 9.5m shares nies, citing a 75 per cent chance that Iraq will accept the UN's limited oil sale deal. It reduced its recommendation

Mobile phones group Voda-fone rose 5½ to 246p in 16m traded helped by a positive note from ABN Amro Hoare Govett which saw 50p of upside in the shares.

help of a huy recommendation ICI powered forward again, closing 17 ahead at a record from Hoare Govett. The broker peak of 939p as a shortage of stock, combined with news of a argued that, since the regional electricity companies demerged their holding in \$390m expansion into Latin National Grid, East Midlands America, squeezed the price was the only one to have

A 30 per cent increase in profits prompted Metal Bulletin shares to jump 80 to 773p.



E EURO STYLE FT-SE 100 INDEX 1111ON (LIFFE) \$10 per full index point

FT-SE 100 INDEX OPTION (LIFFE) 3776) \$10 per full Index point

LONDON RECENT ISSUES: EQUITIES Mr Matthew Siehert, of High Low stock

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615 TSysPhama Hoare, helieves the company 20m shares, or about 10 per cent of the equity. The shares The latest intensification of

125.4 180 F.P. 111.5

TT GOLD	4	on day	1	390	yield %	ratio	High	).m
T GOLD	No.	% cho	Mar	Year	Gross div	P/E	62	muck
FT GOLD	MINE	ES J	NDE:	Χ				

	A 4	% chg	Mur 1	76M	Gross div	P/E ratio	E2 #	Lov
Gold Mines Index (23)	7268.87	-2.9	2337.81	1686,31	1,46	-	2520,73	16061
M Regional Judices								
Africa (16)	3095.37	-1.9	3156.30	2524.36	2.75	36.28	3553.86	22724
Australium (5)	2838,72	-1.1	2861,03	1942.24	2.20	43.10	2927.34	
North America (12)	1955.85	-3.8	2032 39	1404.29	0.69	59.03	2186.39	14048
Copyright, The Pirance Times Lunitard, Figures 31/12/32, 7 Parelle, Let	in brackyte	Show hu	mber of c	companies	Bents US D			

#### Puh groups continued for move ahead following recent strong results from Wetherspood. Regeof Inns jumped 35 to 920p and Wetherspood added a further 10 to 753p for a two-day advance of 31. Allled Domecq came off 2 to 512p, as

offer huilt up around		12/32 11	Persial La	iest prices	Mand True	everation to	r Pas point	- L			
FT - SE Actuaries S	inare in	dices	;					1	he l	JK S	eries
	Mar S	Day's chipe%	Mar 4	Mar 1	Feb 29	Year ago	Div. yieki%	Net	P/E ratio	Xd adj. yld	Tota Retu
FT-SE 100	3777.1	+0.2	3768.8	3752.7	3727.8	2977.0	3.89	2.06	15.59	25.03	1520.1
FT-SE Mid 250	4272.2	+0.8	4244.9	4236.4	4215.0	3327.9	3.45	1.74	20,80	35.56	1697.4
FT-SE Mid 250 ex lay Trusts	4293.2	+0.7	4284.4	4258.2	4234.1	3335.S	3.57	1.79	19,50	37,89	1707.3
FT-3E-A 350	1889.0	+0.3	1883.1	1876.0	1864.1	1485.5	3.80	2.00	18,48	13.22	1555.3
FT-SE-A 350 Higher Yield	1882.5	+0.1	1880.3	1875.2	1854.4	1507.8	4.70	1.84	14.44	13.21	1296.3
FT-SE-A 350 Lower Yield	1901.0	+0.5	1891.0	1681.9	1968.8	1462.7	2.85	2.27	19.37	13.26	1307.2
FT-SE SmallCap	2068.46	+0.3	2063.97	2058.71	2052,77	1691.08	3.05	1.87	22.62	6.89	1678.3
FT-SE SmallCap ex inv Trusts	2050.17	+0.3	2014.77	2039.13	2033.02	1672.04	3.26	1.90	20.21	8.52	1671.1
FT-SE-A ALL-SHARE	1884.59	+0.3	1658.83	1852.03	1840.77	1470.41	3.74	1.99	16.83	12.53	1559.5
FT-SE Actuaries All	Share										
		Day's				Year	DIv.	Net		Xd adj.	Tola
	Mar 5	chge%	Mer 4	Mar 1	Feb 28	<b>ago</b>	ylaid%	COVER	ratio	yto	Hetu

FT-SE-A ALL-SHARE	1884.59	+0.3	1658.83	1852.03	1840.77	1470.41	3.74	1.99	16.83	12.53	1559.5
■ FT-SE Actuaries All-	Share										
	Mar 5	Day's	Mer 4	Mar 1	Feb 28	Year	Div. ylaid%	Net	P/E ratio	Xd adj.	Foto:
10 MINERAL EXTRACTION(S4)	3270.97		3288.90				3.96	1.S1		22.56	1386.2
12 Extractive Industries(6)	4204.61	+0.7	4174.22	4171.31	4162.10	3351.20	3.77	2.39	13.84	85.48	1230.3
15 Oil, Integrated(3)	3306.01		3333.25				4.16	1.35		16.24	1-133:3
16 Oil Exploration & Prod(15)	2241,48	-0.3	2249.11	2247,98	2234 AT	1901.30	2.19	1,41	40,50	0.00	1330.3
20 GEN INDUSTRIALB(Z/E)	2063.16		2075.29				3.96	1.89	15.63		1121.3
21 Building & Construction(34)	1114.37		1105.94				3.63	2.02	17.03		918.
22 Building Matis & Mercha(29)	1933.42		1914.83				3.88	2.03	15.89		959.5
23 Chemicals(23)	2578.94		2557.09				3.88	2.03	15.85		1201.J
24 Diversified Industricis(21)	1790.22		1795.68				5.51	1,48	15.36		985.4
25 Electronic & Elect Equip(38)	2360.90		2333.91				3.05	1.64	22.25		12122
26 Engineering(71)	2341.18		2339.32				3.22	2.34	16.61		1403.4
27 Engineering, Vehicles(13)	2684.95		2683.33				3.85	1.26	25.62		1358.7
28 Paper, Pokg & Printing(28)	2739.44		2731.09				3.66	2.52	13.54		1123.9
29 Textiles & Apparei(19)	1489.14		1485.44				4.67	1.75	15.31		897.0
30 CONSUMER GOODS(81)	3641.41		3630.DO				3.79	1.74	18.90		1325.6
32 Alcoholic Beverages(9)	2923.08		2614.43				4.31	1,67	17.39		1009.7
35 Food Producers(23)	2568,05		2571.89				4.24	1.70	17.29		1141.6
34 Household Goods(15)	2519,04		2528.68				3.79	2.15	15.35		945.P
36 Health Care(20)	1973.04		1969.47				2.65	1.82	25.98		1186.5
37 Pharmaceuticuls(13)	5179.14 4841,71		5137.90				3.20	1.69	23.14		1734.2
38 Tobacco(1)			4868.52				4.85	1.94	13.02		1171.1
40 SERVICES(253)	2357.15		2351.54				2.94	2.10	20.23		1220.6
41 Distributors(32)	2652.48		2642.35				3.69	1.62		4.27	966.0
42 Leisure & Hotels(23)	2940.32		2931.84				2.83	2.09		106.45	
43 Media(46)	3893.38 1899.34		3867.01				2.17	2.13		15.44	1399.6
44 Retailers, Food(15) 45 Retailers, General(43)	1985.71		1946.91				3.85	2.41 2.23	13.51 18.59	2.85	1181.7
47 Breweries, Pubs & Rest(24)	3007.93		2996.33				3.28	2.08	18.29		1111.3 1434.8
48 Support Services(49)	2132.74		2125.33				2.27	2.54	21.74		1344.B
49 Transport(21)	2333.70		2344.28				3.62	1.39	24.81	3.84	984.8
60 UTILITIESCISI	2494.43		2484.97				4.97			35.13	_
62 Electricity(12)	2778.41		2780.36				5.00	2.07		137.11	1058.1
64 Gas Distribution(2)	1591,45		1591.45				7.53	1.37	12.10		798.4
66 Telecommunications(1)	2068.22		2055.62				4.08	1.76	17.44	0.15	936.2
68 Water(12)	2127.61		2110.1e				5.73	2.60	8.39	3.61	1153.8
69 NON-FINANCIALS(567)	1972.24		1965 50				3.77	1.89	17,52		1479.6
70 FINANCIALSHOE	29-30.14		2955.51				3.94	2.50		34,49	1264.5
71 Banks, Retalf8t	4197.28		4185.19				3.69	2.83		65.81	1366.1
T2 Banks, Merchant(5)	3529.95		3529.87				2.65	2.40	16.86		1106.1
73 Insurance(24)	1431.34		1431,75	1432.37	1418.76	1166.76	5.40	2.94	7.89	21.10	1064.8
74 Ute Assurance(5)	3586.59		3594.67				3.89	1.53	20.99	0.00	1451.6
77 Other Financial(23)	2542,00		2539.02				3.58	1.97		13,40	1432.3
79 Property(41)	1452.60	*****	1452.02	1450,59	1451_27	1355.74	4.30	1.31	22.25	3.48	883.0
60 INVESTMENT TRUSTS(126)	3154.28	+0.3	3143.80	3134.95	3125.23	2547.63	2.14	1.04	56.23	10.77	1095.5
89 FT-SE-A ALL-SHARE(901)	1864.59	+0.3	1858,83	1852.03	1840.77	1470.41	3,74	1.93	18.83	12.53	1559,5
68 FT-SE-A ALL-SHARE(901) FT-SE-A Fledging	1864.59 1157.48 1158.23	-0.2	1858.83 1159.52 1161.30	1157.05	1153.90	955.54	2,94	1.93 2.20	18.83 19.29 16.36	4.12	1559.5 1200.1

#### ■ Hourly movements

	Open	****	1440	_ 11.00	1230	1444	_ 1700	10.00	10,10	- myso cay	LUM/G
FT-SE 100	3786.4	3780.8	3788.4	3784.1	3779.2	3779.8	3772.5	3773.2	3776.4	3792.5	3771.5
FT-SE Mid 250	4287.7	4264,7	4268.8	4270.8	4274.2	4271.6	4270.2	4270.9	4272.0	4274.6	4261.
FT-SE-A 350	1891.8	1889.7	1893.1	1991.6	7890.0	1689.8	1687.0	1887.3	1888.7	1895.0	1886.8
Time of FT-SE 100 D	ay's high. 182	AM Day's	loue 1:55	PM. FT-SE	100 1995 H	igh: 3781_1	(02/02/96) L	DW: 2954.2	23/01/25		

■ FT-SE Actuaries 350 Industry baskets

I		Open	8.00	POLUT	11,00	1200	13,00	2440	15.00	16.70	Close	PTOTIONS	COUNT
I	Bidg & Cristron	1129.0	1128.1	1127.0	1729.6	1129.6	1129,3	1130.3	1130.8	1132.1	1132.1	1127.9	42
I	Phyrmaceuticls	5118.8	5114.8	5179.A	6108.2	5104.7	5110.3	5100,7	5111.5	5122.0	e122.5	5081.5	41,4
I	Water			2117.3									17.
I	Banks, Retail			4265.4									12.
ł	Additional informa	tt no rot	a FT-SE A	cueries S	Shere Indi	ces is out	fished in :	Saturday i	aru ma				

Additional information on the FT-SE Actuaries Share indices is published in Saturday issues.

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#### **TENDER NOTICE UK GOVERNMENT ECU TREASURY BILLS** For tender on 12 March 1996

1. The Bank of England ennounces the issue by Her Majesty's Treasury of ECU 1,000 million nominal of UK Government ECU Treasury Bills, for tender on e bid-vield basis on Tuesday, 12 March 1996. An additional ECU 50 million nominal of Bills will be allotted directly to the Bank of England for the account of the Exchange Equalisation Account.

2. The ECU 1,000 million of Bills to be issued by tender will be dafed 14 March 1996 and will be in the following maturities:
ECU 200 million for maturity on 11 April 1996
ECU 500 million for maturity on 13 June 1996
ECU 300 million for maturity on 12 September 1996

3. All fenders must be made on the printed application forms available on request from the Bank of England. Completed application forms must be lodged, by hand, et the Benk of England, Customer Sattlement Services (formerly Securities Office), Threadneedle Street, London not leter than 10.30 e.m., London time, on Tuesdey, 12 March 1996. Peyment for Bills allotted will be due on Thursday, 14 March 1996.

4. Each tander at each yield for each maturity must be mede on a separate application form for a minimum of ECU 500,000 nominel. Tenders above this minimum must be in multiples of ECU 100,000 nominal.

5. Tenders must be made nn e yleld basis (calculated on the basis of the actual number of days to maturity and a yeer of 360 days) rounded to two decimal pleces. Each epplication form must stafe the maturity date of the Bills for which epplication is made, the yield hid and the amount tendered for.

6. Nolification will be despatched on the day of the tender to applicants whose tenders have been accepted in whole or in part. For epplicants who heve requested credit of Bills in global form to their eccount with ESO, Euroclear or CEDEL, Bills will be credited in the relevant systems egeinst payment. For epplicants who have requested definitive Bills, Bills will be aveileble for collection at Customer Settlement Services, Benk of England after 1.30 p.m. on Thursday, 14 March 1996 provided cléared funds heve been credited to the Bank of England's ECU Treasury Bills Account Nn. 59005516 with Lloyds Bank Pic, Bank Relations, Sf George's House, PO Box 787, 6-8 Eastcheap, London EC3M 1LL. Definitive Bills will be evailable in amounts of ECU 10,000, ECU 50,000, ECU 100,000, ECU 50,000, DOO, ECU 10,000,000 nominal.

7. Her Majesty's Treasury reserves the right to reject eny nr part of any tender.

8. The arrangements for the tender are set out in more detail in the information Memorandum on the UK Government ECU Treasury Bill programme issued by the Bank of England on behalf of Her Majesty's Treasury on 28 March 1989, and in supplements to the information Memorandum. All fenders will be subject to the provisions of the information Memorandum (ae supplemented) and to the provisions of this notice.

9. The ECU 50 million of Bills to be allotted directly to the Bank of Englend for the account of the Exchange Equalisation Account will be for maturity on 12 September 1996. These Bills may be made available through sale and repurchase transactions to the market mekers listed in the Information Memorandum (as supplemented) in order to facilitate settlement.

10. Copiee of the Information Mamorandum (and supplements to it) may be obtained at the Bank of England. UK Government ECU Treasury Bills are Issued under the Treasury Bills Act 1877, the National Loans Act 1968 and the Treasury Bills Regulations 1968 as

## **PHARMACEUTICAL BUSINESS NEWS**

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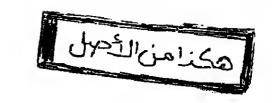
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## **Technology** issues stage bounce back

#### **Wall Street**

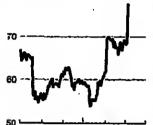
US shares shrugged off a drop in bond prices and rose by midsession as technology shares bounced back from several weak sessions, writes Lisa

Bransten in New York. By 1 pm the Dow Jones Industrial Average was 5.42 stronger at 5,605.57, the Stan-dard & Poor's 500 added 0.29 at 651.10, and the American Stock Exchange composite rose 0.28 at 567.32, Volume on the New York Stock Exchange came to

The bond market slipped in early trading after strongerthen-expected figures on December and January factory

#### WR Grace Share price (\$3)





orders persuaded some investors that the Federal Reserve was unlikely to lower interest rates at this month's meeting of its Open Market Committee. Meanwhile, the Nasdaq composite, which is about 40 per cent technology issues added 6.69 at 1,091.48 to reverse a bit of the 16 points it has lost this

The Nasdaq was bolstered by gains in both the computer-related technology sector and the biotech sector.

The Pacific Stock Exchange technology index, which includes both Nasdag and NYSE-traded technology issues added 1 per cent as large issues such as IBM and Microsoft rebounded from recent weak-

In early trading IBM was \$2% stronger at \$118% and Microsoft added \$1% at \$97%. Biotech issues were lifted by

a wave of approvals from the Food and Drug Administration. The American Stock Exchange biotech index added 1.8 per cent. Chiron rose \$21/4 at \$112% after the FDA approved the marketing of an eye implant developed by the company. Other rising biotech companies included Amgen, up \$2% at \$63% and Biogen, \$3%

stronger et \$714.
Eisewhere, W.R. Grace soared \$9% or 14 per cent to \$78% after it said that it would not merge with Hercules. Mr Thomas Gossage, chairman of Hercules and e member of Grace's board, resigned his

position at Grace leading to speculation that his company might launch e hostile take-Shares in Hercules slid \$% at

BankAmercia added \$1% or 3 per cent at \$77%. Late on Monday the bank announced that it would buy back up to \$2bn of its common stock and \$1bn of preferred stock over the next two years.

#### Canada

Toronto was weak at midses-sion in restrained trade ahead of today's federal budget. The TSE-300 composite index

was down 17.05 by noon at 4,962.80 in volume of 35.8m Cyclicals were heavily traded, including Echo Bay Mines which fell C\$% to C\$m 17%. Denison Mines, the uranium miner, slipped 1 cent to

47 cents after Monday's rapid Forzani Group, the sporting goods retailer, was sharply lower for a second straight day. The shares fell 50 cents to C\$3.25 on reports that the company was facing a cash crunch after a disappointing sales sea-

### **Buenos Aires falls back**

BUENOS AIRES was slightly lower by midsession as brokers said thet the market was taking a well earned pause after heavy gains in the last two sessions. The Merval index was off 3.00 at 524.78 by midday.

Inflation and trade data released late on Monday caused little interest, and most investors were watching the US for direction.

SAO PAULO was also mixed in midsession ectivity. By midsession was little changed by

Many investors were cau-tious ahead of testimony by the bead of the central bank, Mr Gustavo Loyole, to congress on the Banco Nacional failure. The central bank has come under heavy fire recently for allegedly failing to detect a Banco Nacional over a 10-year period. MEXICO CITY was down 1.5 per cent by midsession, with the IPC index off

## S Africa golds tumble

FT/S&P ACTUARIES WORLD INDICES

Pound Starting index

198.70 134.74
190.82 123.87
190.82 123.87
200.12 141.20
136.01 108.87
180.72 103.25
294.23 201.85
177.34 121.48
185.15 126.83
186.03 118.10
426.44 292.12
252.57 176.81
144.84 99.98
521.46 357.21
1078.36 738.69
272.44 186.62
79.20 54.25
231.71 158.72
433.73 297.11
377.02 288.26
159.58 109.36
327.62 24.66
225.23 154.97
175.78 120.42
225.73 156.76

US Dollar Index

.. 173.19

.161.16

Johannesharg was depressed by a 5.4 per cent tumbie in the gold index as industrials, too, gave up early advancee, dashing hopes that the sector could resume the strength with which it had begun the year.

Analysts noted that activity hed heen generally quiet, which accounted for some of the market's volatility, with local and foreign institutions remaining abeent until a

clearer trend emerged.

They added that gold shares would continue to slide until the bullion price managed to lift itself above the \$393 to \$394 range in which it had set-

NATIONAL AND REGIONAL MARKETS

France (96)

hely (59) Japen (482) Majoysia (167) Mexico (18)

Namerland (19) ... New Zealand (13)

Norway (33). ..... Singapore (44).... South Africa (45) .

North America (732). Europe Ex. UK (525)

Figures in parenthese

The ali-share index lost 87.0 to 6,651.6, industrials fell 32.2

to 8,333.3 and the golds dropped 94.9 to 1,668.6. De Beers ended 75 cents weaker at R122.50 on results. Shares in Teljoy Holdings lost R1.15 or 21.3 per cent to R4.25 efter the company ennounced that it would report a meteriel loss in the year to March 31, 1996, Tellov said on Monday that the execntive chairman and founder,

tled following its collapse late on Monday.

Mr Thoo Rutstein, and the managing director, Mr Denis Kennedy, were resigning.

## Amsterdam flattens out, Hunter Douglas climbs

After a good etart, AMSTERDAM bumped into negative factors, such as a growing conviction that the US would probably not cut interest rates in the near future. The AEX index finished up a scant 0.13 at 519.18, after a high

Hunter Douglas, the maker of window blinds and architectural products, rose F12 or 2 per cent to F196.70. The company reported a much stronger han expected 1995 profit, lifted its dividend and made an encouraging stetement ebout prospects for 1996, particularly in the emerging economies of Latin America and Asia.

However, it was a different story et Hoogovens, the steel and aluminium group, which fell F1 2.50 to F1 66.10 ahead of tomorrow's resulte. Brokers described the fall as a technical correction following tha stock's 25 per cent rise since the start of the year. VNU, which reported 1995

esults in line with forecasts just after the market closed, was 40 cents higher et FI 28.70. OSLO saw the rise and rise of Kveerner B, up another NKr7 et NKr205, which helped the total index reach a lifetime, intraday peak of 783.32 before it closed 1.05 higher at 779.07. Attention shifted to Aker, another offshore bive chip.

towards the end of trade; more

**Hunter Dougles** Share price and Index rebased

than 4m Aker shares were traded as the A closed NKr2 higher at NKr121. HELSINKI featured gains in

the telecoms bive chip Nokia A, up FM3.60 at FM165 on a US network order, and in Kone, the elevator marker, which climbed FM15 to FM450 on strong demand, as the Hex index closed 10.65 higher et 1,846.87. However, the apparent fading of recently strong US interest in Raisio, the foodstuffs and chemicals group, left it FM19, or 12 per cent lower et

FM142. ZURICH turned back from a firm opening and the SMI gave up 17.2 to 3,388.4 on profit-tak-ing after the strong run which

all-time high on Monday. CS Holding, with 1995 results in line with most expectations, finished SFr2.50 weaker at SFr112.50 as a number of small portfolio management banks downgraded their recommendations. They were said to have reservations about the bank's method of accounting for extraordinary provisions of

SBC lost 5Fr5 to SFr440 but UBS bearers edged SFr1 higher et SFr1,291 on continued speculation that a truce has been forged between the bank and its largest shareholder, the BK Vision chairman, Mr Martin Ebner. BK Vision rose SFr9 to SFr1,565. A SFr5 jump in the UBS registered shares was ettributed to heavy buying by

e small Zurich bank. Industrials were weak. Brown Boveri losing SFr11 to SFr1,426 on foreign selling. Swissair dropped SFr37 to SFr1,118 on profit-taking after recent strong gains.
FRANKFURT lacked impatus

again, and pushed secondary stocks around as the Dax index fell 14.31 to an Ibis-indicated 2,472.52 in turnover up from DM7.4bn to DM9bn. The bed news about Fielmann's profits growth rate left the optician another DM1.90, or

FT-SE Europeack 100 1898.97 1597.11 1595.02 1590.92 1590.64 1586.60 1567.96 1588.41

SFr575m, which were written off against the shareholder after a 15.7 per cent drop on Monday afternoon. This, said

Me Rarbara Altmann et B Metzler in Frankfurt, impacted on analysts' feelings ebout other companies and the sportswear company, Adidas, dropped DM4.30 to DM94.20 after a strong run. Duetsche Bebcock, the troubled engineer, continued to be sensitive to any sort of bad news and fell DM3.60, or 3.7 per

> petition euthorities left the German company DM10 higher PARIS feit the burden of technical selling late in the day but the CAC-40 index just manmaged to keep e tenuous grip on the 2,000 level, closing off 13.37 et 2,001.94.

cent to DMS3. But the likely

reference of Gehe's LLoyds

Chemists bid to Britain's com-

Turnover was FFr4.6bn. Valeo featured again as both Renault and Peugeot threat-ened to move their business to another supplier if the car

thought was unsympethetic. Vaico, which lost FFr9 to FFr259.80, had been subject to a series of rumours after Cerus of Italy, part of the De Beneditti group, indicated that it might sell its 28 per cent stake. Peugeot rose FFr11 to FFr791 and Renault pnt on 50 cen-

parts manufacturer was taken

over by a company they

THE EUROPEAN SERIES

Open 10.30 11.00 12.00 13.00 14.00 15.00 Close

Her 1

Mar 4

MADRID stayed upset, and the general index fell another 4.98, or 1.5 per cent to 324.10. Sector by sector, Monday's victims were singled out again, with banks off 1.4 per cent, construction 2.1 per cent, and

utilities 2.4 per cent down. However, the market also caught up with stocks which heid up remarkably well on Monday, said Ms Nicola Mann et Merrill Lynch. Gas Netural and Pryca, the retailer, lost 5.1

and 3.4 per cent respectively.

MILAN was pulled back from its highs by profit-taking after volume picked up on renewed

foreign demand. The Comit index rose 9.09 to 620.92 but the real-time Mibtel index turned back from a peak of 9,933 to finish 43 higher at 9,875. Eni picked up L57 to L6,007

on Monday's preliminary 1995 results that were in line with expectations. Benetton rose L240 to L18,909after forecasting a 5 to 6 per cent rise in 1995 profit. Flat, which a rise in the price of its cars, rose L69 to PRAGUE rose for the sev.

selp is con and from enth consecutive session, the PSE index gaining et 1.0 to 475.6. Leading stocks all did well. Ceska Sporttelna, the savings bank, dropped a fur-ther Kcs9 to Kcs206. Dealers had expected a readjustment in the price after lest week's strong gains.
BUDAPEST extended the

rise made et the start of the week and the Bux index fin-ished at another all-time high, up 65.37 at 2,347.84. Turnover almost doubled, jumping to Ft1.35bn from Monday's Ft695.7m.

ntellige The appointment of e-new finance minister, Mr Peter Medgyessy, has restored inves-tor confidence in the country, particularly from foreign insti-tutions.

threms

Written and edited by William Cochrane, Michael Morgan and

Nikkei average and Hong Kong make solid progress

2.7 per cent lower at DM68.90

#### Tokyo

The Nikkei average gained moderately on technical buy-ing, which counterbalanced selling of high technology and banking stocks, urites Emiko Terazono in Takyo.

The 225 index rose 119.99 to 20,183.87, after moving between 20,069.76 and 20,303.87. However, weakness in the banking sector depressed other indices, with the Topix index of all first section stocks down 1.96 to 1,554,08 and the Nikkel 300 retreating 0.58 to 289.04. In London, the ISE/Nikkei 50 index fell 1.10 to 1.352.85.

A decline in the high-technology sector in overnight trading on Wall Street prompted profit taking in electricals, while continuing uncertainty over the government'e budget bill, which contains the controversial public spending plan to bail out housing loan companies, hit bank stocks.

Volume was estimated et 350m shares against 266.2m. Advances led declines by 511 to 487, with 206 unchanged. Reports that the ruling coali-

tion and the banks had housing loan bailout plan, failed to raise confidence. In order to avert criticism by politicians, banks egreed to an additional bailout contribution of Y500bn by raising profits by Y1,000bn over the next five years through restructuring. The extra profit would then be channelled to the government

in the form of corporate taxes. Among the banks Industrial Bank of Japan, the day's most active issue, fell Y10 to Y2,650. Mitsubishi Bank lost Y20 to Y2,200 and Bank of Tokyo Y70

In technology stocks, Toshiba dropped Y3 to Y801 and Fujitsu jost Y10 to Y1,060. Semiconductor-related stocks were also lower, Advantest declining Y130 to Y5,560.

5peculative stocks gained ground on ective trading. Toyo Umpanki rose Y11 to Y570 and Shinko Electric Y25 to Y835. In Osaka, the OSE everage fell 13.69 to 21.572.83 in volume

Pound Sterling Index

Oross Div. Yield

3.80 1.80 3.32 1.59 2.44 1.51 1.97 3.08 1.87 5.33 1.67 1.60 1.51 3.24 4.63 2.45 1.38 2.45 1.56 1.98 4.04 2.16

Local Local Currency % chg Index on day

155.55 177.47
143.00 142.83
163.00 7.58.91
123.38 281.02
119.19 154.27
132.68 175.37
146.42 175.37
146.42 175.37
146.42 132.68
337.24 436.29
199.23 199.23
114.38 99.08
412.38 527.03
626.55 64.38
62.65 64.38
62.65 64.38
63.34
130.00 290.85
185.24 290.31
343.00 290.85
125.28 155.94
229.25 331.25
126.28 155.94
139.01 177.22
178.91 173.68
139.01 177.36
139.01 177.36
139.01 177.36

188.08 203.68 158.57 178.89 223.74 254.79 125.13 111.52 138.90 137.01 198.82 258.49 143.71 182.31 223.45 141.23 157.91 172.31 184.86 227.00

of 2195m shares. Nintendo, the video game maker, fell Y90 to Y7,020 on profit taking.

#### Roundup

An index futures short squeeze and further talk of covered warrant issues took HONG KONG 1.8 per cent higher. The Hang Seng index surged 200.03 to 11,454.08 as turnover proved to HK\$5.8bn

HSBC, the most highly capi talised issue, jumped HK\$1.50 to HK\$127. Its Hang Seng Bank unit soared HK\$1.75 to e peak for the year of HK\$79,50 on foreign buying. Hutchison and Henderson Land climbed HK\$1, to HK\$50.50 and HK\$58 respec-

TAIPEI jost 1.3 per cent after China announced that it would conduct ground-to-ground missile tests, at sea and just off the island, between March 8 and 15. The weighted index lost 62.49 to 4,792.74. Turnover was T\$26.6bm.

Brokers noted that a T\$200hm government-backed stock market stabilisation fund had entered the market to prevent a steeper fall. The index was lower

heavy sell-off, eepecially on high-technology electronic issues started to emerge one hour before the close. Electronic shares, which had been affected by worries about

the future of the semiconductor industry, jost another 2.6 per cent as a group, Winbond slumping 6.8 per cent to T\$61.50 and Mosel losing T\$3, or 5 per cent at T\$57. But the plastics issue,

Teiwan Polypropylene, rose TS1 or 1.8 per cent to T\$55.50. SYDNEY fall back, pressured by e lower gold price and the prospect of a mini-budget by the new government. The All Ordinaries index

slipped 15.4 to 2,308.0 in turnover of A\$826.7m.

Brokers felt that the prime minister-elect, Mr John Howard, could demand e mini budget on fears that the current year to June budget would produce a deficit, rather than the surplus previously fore-

Local Currency ( index

| Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Index | Inde

240.10 232.91 160.05 184.23 201.83 248.54 189.00 181.73 206.42 200.24 137.50 188.39 178.85 206.81 169.63 174.58 282.22 283.47 194.79 224.22 253.80 265.02 222.22 231.23 165.38 158.47 105.89 125.35 111.96 171.67 148.66 153.57 161.20 175.77 120.79 139.04 137.28 183.39 158.02 162.23 256.53 248.85 171.00 198.84 255.68 262.26 182.77 194.26 167.74 182.12 125.16 144.06 182.62 187.87 152.62 157.38 269.76 281.09 193.15 222.34 253.60 292.69 229.25 235.85 182.57 177.04 121.68 140.04 141.45 184.71 159.68 162.22 204.99 193.85 135.65 157.29 171.73 207.54 170.18 170.66 239.19 232.03 139.44 163.53 223.68 242.17 187.55 189.71

03 2.12 207.37 201.15 138.23 159.12 176.52 209.73 172.24 173.18

#### cast. The gold index fell 65.5 at 2,146.7, with Placer Pacific 12 cents lower at A\$2.67 and Dominion down 15 cents at

SINGAPORE moved ahead on selective demand for blue chips in volume that almost doubled to 146m shares. The Straits Times Industrials index rose 10.10 to close at the day's high of 2,432.38.

The index benefited from a 60 cent rise to \$\$12.90 in Cerebos Pecific, while Fraser & Neave gained 20 cents to

KUALA LUMPUR remained et a 16 month high as pro-gramme buying pushed the composite index up 17.49 or 1.6 per cent to 1,124.39.

tions were again active, accumulating blue-chips, as retail investors consolidated their positions after the recent buy-

ing spree. SEOUL was pulled higher by edvances in Samsung Electronics and other blue chips in otherwise gloomy trade. The composite index rose 2.62 to 857.72 but decliners overwhelmed advancers 516 to 209 while volume remained thin at 16.9m

Samsung Electronics led the way for blue chips, gaining Won5,500 to Won135,500 after Monday's news that the company would buy back 2.7m of its own common and preferred

Tae Hwa fell Won160 to its

Dealers noted that institu- lower limit of Won2,580 on rumours that the company would be placed on exchange's supervision list, due to poor performance.

BANGKOK was weaker in thin trade as poor domestic

economic data and disappointing 1995 corporate results kept many investors on the side The SET index lost 14.20 at

1,311.66 in turnover of Bt3.8bn. The commerce ministry on Monday announced that the consumer price index had risen 7.4 per cent year-on-year in February, unchanged from the previous year; and yesterday the central bank said the current account deficit had widened to Bt335.7bn in 1995 compared to Bt203.2bn in 1994.

Brokers said that poor earnings results by several companies in the finance, property and building sectors bed

depressed sentiment. MANILA was in a holding pattern as investors digested news of a rise in February inflation figures. The composite index made 2.85 to 2,908.68. Volume narrowed to 5.8bn

shares worth 1.8bn pesos. SHANGHAI's hard currency B index was weak on selling triggered by worries over the outlook for corporate results. The B index lost 0.097 to 52.141 while the A index gave up some of Monday's 9.3 per cent bounce, falling 16.041 to

607.171. public holiday.

Year-End Report

Increase in pre-tax results by 44 percent, to MSEK 594 (413). Profits per share increased to SEK 11.00 (6.70). The proposed dividend is SEK 4.00 (3.00).

#### Sales

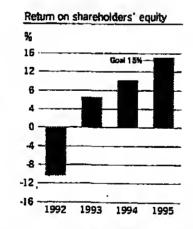
Sales for the Group totalled SEK 12,154 million, an increase of just over 4 percent from 1994 based on comparable units and exchange. The United States deserves special mention because of the success they have enjoyed. Tough streamlining and development work over the years have now provided results. This was combined with successful marketing and sales activities in 1995. The Nielsen & Bainbridge division showed high return on capital employed, 31 percent (24.1).

Return on shareholders' equity rose from 10.1 percent to 15, thus reaching the Group's target.

Office Products increased sales by 6 percent. The operating margin was 6 percent (3.8). The reasons for this positive development were a general improvement in demand and stronger market positions.

Retail Supplies and Equipment (Meto) reported a 2 percent increase in sales. The operating margin was 5.4 percent (6.6). Sales were weak in Germany, Meto's largest market, but increased in France.

Picture Framing Business Area (Nielsen & Bainbridge) increased sales by 3 percent. The operating margin was 14 percent (12.2). Markets in North America and Europe developed



The Annual General Meeting will be held on the 8th of May in Stockholm

The Annual Report can be ordered from Esselte AB, Group Information, Box 1371, S-171 27 Solna. Telephone: +46 8 27 27 60. Fax: +46 8 82 56 32, Also available on Internet http://www.esselte.com

Esselte is one of the largest suppliers in the world for office products, labelling systems and picture frames. Esselte is a public company listed on both the Stockholm and London Stock Exchanges, with 10,000 employees in 25 coun-



of British Telecom



Digital systems Raw power of the information age

Pages 4-15

Software at work

Helpdesks Keeping the show on the road



Network

Strategies and options

How shares are performing

Stockwatch



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K 594 (413).

# Information Technology

FINANCIAL TIMES REVIEW

Wednesday March 6 1996

# Help is on hand from intelligent agents

Just as digital technology threatens to swamp us with information, advanced computer software may also provide a way to sift, sort and manage data in the information age, writes Paul Taylor

he digital revolution is having a profound impact on the sheer volume of data confronting businesses and individuals.

Electronic mail, the Internet and the arrival of digital broadcasting represent an information avalanche which together threaten to engulf us. According to conservative estimates, the amount of data - text, pictures, video and sound - is doubling every three years leading to what has been described as "information overload".

Managing this glut of data - and sifting out important material - is crucial for many organisationswhich depend on processing information in order to survive. However, over the past few years, a particular has emerged from the laboratory which could alleviate the problem.

Ovum, the UK-based technology consultancy, defines intelligent agents as "objects that think". They comprise a self-contained software programme or routine which is responsible for executing part of a process while making use of information contained in a knowledge base. These intelligent agents typically operate in a distributed computing or client-server environment and address self-contained tasks, working in a semi-autonomous manner and communicating with the user and system resources.

More advanced intelligent agents may communicate with each other, and co-operate to carry out tasks beyond the capability of a single agent. Some intelligent agents have the capacity to acquire their knowledge through learning.

While the commercial application of intelligent agents is still in its infancy, the technology has its roots in the research into distributed artificial intelligence undertaken at the Massachusetts Institute of Technology and elsewhere.

"Intelligent agents are an interesting hy-product of artificial intelligence, an area of technology which has traditionally been perceived as one with little impact on business," says Dominique Verdejo of Ilog. the software development tools company. "Intelligent agents are now being increasingly integrated in various industrial applications, most notably in the telecoms sector and for developing enhanced services on the fast-growing Internet."

In the last couple of years, com-panies such as AT&T, Apple Computer. British Telecommunications. Hewlett-Packard, International Business Machines, Logica and Microsoft have begun to deliver key products and supporting technology.

Other information agent specialists include California-based Verity and executive information system suppliers such as Planning Sciences and Comshare which have begun to bulld intelligent agents into their

In the telecommunications maran intelligent, or information, agent sion, filtering and correlation capabilities are being used to automate processes in network management. US Sprint, for example, has designed a wide area network supervision application called Clearline, using an intelligent agent to correlate alarms and detect the origins of communications failures.

"Intelligent agents are also being used in the area of electronic commerce," says flog's Verdejo. "They are able to move from one machine to another, bringing with them encansulated data and rules which allow them to pegotiate on behalf of their owner in electronic transac-

Elsewhere, banks are using intelligent agents to make loan decisions: and manage credit risk. However, managing information

is probably the biggest and most immediate market for intelligent agents. Among specific applications, the Office of Media Affairs at the White House receives hundreds of requests for information via the Internet each day. It redirects these requests through an agent-based publication server at MIT that uses formal language techniques to determine which documents the authors

should receive. BT, along with several other developers such as Intell.X, has developed a programme which it claims "offers effective answers to 'information overload' - where peomuch information assimilate."

an information agent which searches texts stored on a computer select those of most interest to can abridge text to a fraction of its length

summaries authors' OWI abstracts shown that an abridgment down to five per cent of the original length typically contains some 70 per cent of the original's important infor-

mation There are many professions and husiness functions where fast. easy access to banks of data has brought huge advantages in terms of

"The fact that there is now so much 'on tap' means it threatens to overwhelm the very people who need to absorb it - whether they are doctors or dentists needing to keep lawyers collating case material or samen sifting through com-

decision support specialist. It has added a feature called Detect and

Predents
THE SOFTW
AGENT without losing significant

IN OPERATION by mation while a quarter length summary keeps virtually all the infor-

availability, but there is a parallel disadvantage as well," said Keith Preston, of BT's natural language group when the Summariser technology was unveiled last year.

pany and market information.

Others to exploit this new agent technology include Comshare, the "Agent-based systems represent the next generation of strategic weapons for informa-

Wrathall, Comshare's chief execu-

cial reporting and retail planning Planning Sciences - formed by a applications which run group of former Lucas Industries client/server networks. software engineers - have already Detect and Alert software agents. taken the technology a step further, which Comshare calls robots, perbuilding wandering information form time-consuming, repetitive agents capable of working across a geographically dispersed network, bases for significant changes. When into its latest version of Gentium, a a change is detected, an alert can be highly sophisticated enterprise flashed to the user or flagged in a

Alert' to its

executive information system, finan-

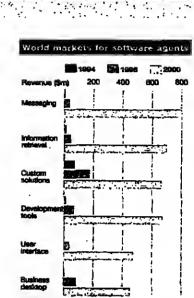
information system. "Given the amount of information managers are asked to absorb, this type of programme is becoming essential," says Mr Ian Rawlings.

Planning ences' marketing director.

"Companies are looking for a competitive edge, this gives it to them."

Gentium offers a range of agents including director agents, which watch computer directories for content changes; extractor agents which extract data from text files; phone agents which manage telephone connections for modern access to remote systems; process agents which manage the process, and bookworm nts which control the replication

of data and objects. Meanwhile. Verity'a Topic software agents link the Internet, the internal network and CD-Roms, instantly searching, filtering and delivering personalised information from anywhere in the world, "right



to the user's desktop".

"One of the greatest challenge facing large corporations today is how to deliver information that is scattered throughout the enterprise and the Internet to scattered users in a timely, relevant and cost effec-tive way," says Philippe Courtot. Verity's chief executive.

Verity's Topic search engine is already embedded in Lotus Notes Adobe Acrobat and more than 200 other publishing products. On the Internet, Topic has been chosen by Netscape and Quarterdeck among others. For example, Quarterdeck's new WebCompass programme searches on multiple World Wide Web search engines such as Yahoo. Lycos, WebCrawler and Digital's AltaVista from a single location organise and index the data for storage on the PC and automatically update databases by performing reg-

"By the end of the decade, intelligent agent technology will have come to pervade our interaction with information technology, ou desktop working practices, and many of the support services we which believes the worldwide market for agent software could grow from \$37m in 1994 to

\$2.6bn by the end of the decade led by information retrieval. "Intelligent agents promise to provide electronic secretaries which will arrange your meetings and manage your diary; electronic librarians, which will retrieve the information you want from on-line sources; and a tireless workforce of office and factory staff, which will constantly carry

out repetitive tasks with a degree of intelligence. Where the word processor sup ported an electronic typing pool. intelligent agents for the office will ease access to information and services for non-technical users. Agent technology can enrich workflow

applications, and provide flexible easily updated process automation." Fortunately, therefore, just as digital technology threatens to swamp us with information, digital technology may also provide the means to sift, sort and manage data

in the information age. Intelligent agents will increase the performance gap between organisations which use IT effectively and those which don't," warns

SIEMENS NIXDORF

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## The key element is network management'

he appointment late last year of Sir Peter Bon-field as chief executive of British Telecommunications, the world's fifth largest telecoms operator, is a clear indicator of the future direction of the information technology

industries. Sir Peter, formerly chairman and chief executive of ICL, the UK-based computer company owned by Fujitsu of Japan, has no direct experience of running a telecoms company. BT is four times the size of ICL and still bas some way to go in making the change from a bureaucratic, state-owned monopoly to market-driven, competitive organisarioo.

Bonfield is, however, known for management skills and strategies which have kept ICL in the black over the past five years while larger rivals have been left floundering in red

He also has an uncommon mastery of the technologies which uoderpin computlog and, increasingly, telecoms: "Big switch technology" be points out "is going to be computer based. Switches will be built up out of standard microprocessors: the software will be disconnected from the hardware and the key element is network management. All of this sounds very much like the computer husiness.

Bonfield, like, for example, Mr Ron Sommer, bead of Europe's largest telecoms operator. Deutsche Telekom, is one of a new breed of telecoms executive whose skills, boned in different but related industries, are now critically important to the telecoms business.



Both have experience of consumer electronics. Mr Sommer was formerly head of Sooy Europe, Bonfield worked for Texas Instruments before the experience of running companies in industry where competitlon and technology has forced down profit margins. The telecoms industry, bugely profitable at present, can expect to see margins tighten and profitability shrink by the turn of the century for much the same reasons. The computer industry, Bon-

field points out, bas been through a pain barrier: "You are talking to companies who are competitors one day, collaborators the next and nartners the next. Until recently, this has not been common in the telephone business."

en if the technologies are similar, he is not persuaded by the idea of convergence between computer and telecoms companies, pointthrive within AT&T as an example of the cultural divide

between the industries: "In some of the newer areas there may be links, perhaps joint ventures or new companies set up by combinations of telecoms companies and computer companies," he says. Mr Takuma Yamamoto, president of Fujitsu, warned Bonfield that he might find the move to telecoms "boring". After two months in the husiness, however. Bonfield is finding plenty

to interest him. "It is the combination of several things happening at once. Changes in the laws which reg-

Sir Peter Bonfield, chief executive of British Telecommunications and former chairman of ICL, the computer company, has an uncommon mastery of the technologies which underpin both industries. He is interviewed here by Alan Cane

amounts of activity. Companies are getting into markets from which they were previously barred."

There is a lot of activity between players who would not have been easy bedfellows last year or the year before," he says, pointing to tha link up between MCI, the second largest US long haul operator and Mr Rupert Murdoch's News International and the daals that a wide variety of customers are striking with Microsoft.

the largest US software house. "The other hig issue everywhere is the approach of regu-lators to how a competitive husiness should be set up." A significant difference

between the computer business and the telecoms business, of course, is the presence of regu-lation. Most telecoms companies are still state-owned monopoly operators.

Whare they are privatised and the market liberalised, as in the US and UK, regulators are imposed to protect customers from undue price rises and to oversee the emergence of a competitive market.

A regulator can affect profitability markedly. BT has returned about £1bn to its customers in the form of price reductions over the past few years through a formula which regulates many of its prices. It is a global problem. Bonfield points ont: "One of the

things we are saying to regula-

ulate telecoms, particularly in tors around the world, and not is not simply bound into this the US, are driving buge just in the UK at the moment. small island. We have to make is that the risk-return profile [a measure of an investor's likeli-hood of making a return from an investment] of telecoms national aspirations." companies in the future will be

quite different from the past. "Regulators should not look at them as a utilities offering safe and substantial returns: there are technology risks. market risks, life cycle risks of the products and services. All of this makes the business harder to read, so we oeed an adequate return on invest-

He accepts that margins are going to be squeezed, and emphasises the need for costsavings: "The emphasis has to he on whether we can grow the market with new services to offset the squeeze on margins. As a first impression, it seems to me easier to do this in telecoms than in computers."

He has in mind the value-added services such as callminder and call-back, based on conventional technology or online services snch as BT's "Wireplay", online videogames played over the public network and currently being tested in the UK.

How should the interests of the customers and the shareholders be reconciled in a company such as BT?
"The balance," be says, "lies

in how we put our investments together. Our intention is to be a world-class telecoms company and that means a BT that decisions about what we invest in the network and customer service here against our inter-

"In reality, we are atill investing a buge proportion of our available assets in the UK domestic market. We will need to skew that towards the international side over the next few years. That will force us to be much more efficient in utilising the capital that we are put-

Bonfield's search will be closely watched by competitors

ting into the UK." Bonfield explains that he is seeking innovative ways of expanding the reach and serviceability of the UK network without the classic way of

doing it all ourselves". Bonfield explains that the range of options he is considering includes sharing the risk of developing new products and services with the companies suppliers: "At the moment, most of it is still on BT's nickel."

"We don't yet know the answer," be says, "but somewhere there has to be a way to free more resources to develop our international activities. We

do not want to deplete one to fund the other. We've got to do both and be more innovative in how we do tt." Bonfield'a search for ways to

strengthen BT's international activitles will be watched closely by competitors from both East and West. AT&T, the largest US company, claims to be tackling the UK market seriously: "I do not think anybody bere is under any illusions about AT&T'a ability to be a good competitor, although it may take it some time to build up customer numbers," Bon-field saya.

Deutsche Telecom, France Télecom and Sprint of the US seem to have the green light to challenge BT and MCTs Concert alliance for international customars.

A member of a number of high level committees examin-ing and advising on the future of the industry. Bonfield has concerns which go beyond simple competition - "the big question is whether the coosumers will really find this technology useful," he says.

"Will It generate this utopia of a future where we will all be more efficient, more perfectly informed and better entertained?

"Or will the technology simply cause 'technofear', with continued worries about unemployment and so on. The industry itself has got to tackle that. If the technology aimply generates hostility, we will not get

## Middle-sized companies most at risk in digital future Some of the most informed speculation about the future of information

e used to think of information technology as a device that sat on the desk, or fitted into a pocket - today, It is woven into the fabric of our lives," says Nicholas Negroponte, director and co-founder of the Media Lab at the Massachusetts Institute of Technology (MIT). He believes the increasing

digitisation of information - turning video, text and sound into streams of bits that can be sent over global networks - will have far-reaching effects on industries and indi-

Impact on industry

"If an industry can be turned the digital revolution," says Negroponte, author of Being "If it can't (such as with hamburgers or milk), the transition will be slower."

technology comes from Nicholas Negroponte, the US academic who is also a columnist in the influential US magazine Wired and author of Being Digital. Nicholas Negroponte, director of MIT's Media Lab talked to Joia Shillingford at the World Economic Forum in Davos, Switzerland coin or banknote will increas-

ingly be replaced by credit card payments and digital casb. "1996 will be the year of digital cash," says Negroponte. The banking industry is in big trouble, be adds, unless bankers can find a way of adding value to the bits. They will bave to become particlpants in the digital world and sbow that they can keep your

bits (of electronic money)

safely for you. Other industries threatened from atoms of matter into bits by the replacement of atoms According to Negroponte: "The transport of bits (over phone

"The people who will make money are the people who or middle-sized companies." For example, the atoms in a make the bits, add value to

them, own them or protect them. Disney, which owns lots of bits (such as digitised video and images), can distribute and use them in new ways."

Previously, says Negroponte, publishers have been in the atom business - for example, delivering newspaper pages made up of atoms. But with the growth of online publications, they will increasingly be delivering bits.

This will change the economles of publishing and lead to "disintermediation" - or loss of of information on a computer, with bits include telecoms the middle. "The digital world it will be threatened quickly by companies and publishers. gets bigger and smaller at the same time, and the middle falls out," says Negroponte.

"There is little room for middle anything: middle managers Blg organisations can offer a

wide variety of content, Medium-sized organisations bave little advantage over small ones once the cost of antry for publishing (on the Internet, for

example) is lowered.
"There will be Rupert Mur-docb at one end and a Moroccan bousewife with a couscous file server on the Net at the other, and nothing in between," predicts Negroponte. One casualty of this chang-

ing world will be academic journals publishing new material accompanied by peer reviews (such as those published by Reed Elsevier). A peer review can take a year and a journal can cost

Negroponte believes "this will be a dead husiness in the next few years. Faculty won't be publishing that way." He expects this sort of article to be published online instead.

"Publishers will end up being talent sconts," says Pro-fessor Negroponte, who is also a founder of, and writer for, Wired magazine. "They will discover authors and publish them. But once the authors are as well known as Douglas Adams or Michael Crichton they won't need a publisher - they'll put their work online

However, putting publications online also creates new ways of presenting information. The Fishwrap project at the Media Lab seeks to make oews stories more meaningful depending on the audience.

disaster (such as Bhopal) could

describe bow it destroyed a town the size of Boston if being read by Bostonians or the size of Manchester if being read by Mancunians,

A weather report for Alaskans could describe 55°F as a "warm 55 degrees," whereas one for people living in Florida would describe it as a "cool 55

Television is also set to change. As digital television channels become available. TV will become a form of data broadcast, which broadcasts digital video on some channels, some of the time but at other times broadcasts data or digital radio.

"TV broadcasters have to get into the data broadcast business," says Negroponte. Ha sees television as getting more interactive. Instead of a few cameras trained on a football match, you could have cameras capturing every point of view, so that viewers could decide what they wanted to look at.

Impact on individuals

In other ways, too, Negro-ponte expects the digital revolution to give people more choice. He says: "Now we live a very synchronous existence. with large numbers of people watching the same television programme at 8pm or working from 9am-5pm

"But life will become far more asynchronous and personalised. People will be able to watch what they want when they want, and work where and when they want."

Some people have concerns about the blurring batween work and personal lives that technology makes possible. But

Negroponte believes there is a trade-off. "I'd rather answer e-mail on a Sunday and he in my pyjamas longer oo Monday," he writes in Being Digital. in the longer term, what he calls "things that think" could enhance everyday life. For example, the fridge could send

the way bome. Or your car could log on to the Net and

download a weather forecast. The future of FT is buried in all the other areas of our lives," says Negroponte. This is why MIT's Media Lab takes a puter scientists; the rest are drawn from all walks of life including photography, filmmaking, architecture (Negroponte's first degree subject at MIT) and so on. When the Media Lab was

founded in the early 1980s, the

idea that video, publishing and computer interactivity would enrich each other seemed far 🐠 fetched to some. But it bas been vindleated by growing convergence between the information, entertainment, telecoms and computer industries. Today, the Media Lab Is funded to the tune of \$25m by 160 companies in a wild mix of industries: not just IT and tele-

coms, but also toys, clothing and furniture. Sponsorship is drawn 50 per cent from US companies, 25 per cent from Europe and 25 per cent from Japan. Sponsors include IBM, BT, Lego and Reuters. Of the 100 projects in which

the Media Lab is involved, most fall into three groups: learning and common sense; perceptnal computing, and information and entertain-

They range from computerbased intelligent agents which help pick music you will like (learning and common sense) to front door knobs that recognise you (perceptual computing) to three-dimensional TV (information and entertain-

In the future, aavs Negroponte, you may buy a television in a paint can and literally paint it on a wall. Or wear a computer in a sports shoe that is powered by walking and communicates with your wristwatch. When he says IT will be part of the fabric of our lives, be is not always being meta-



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multidisciplinary approach to predicting and inventing the

Half the 350 staff on the

ment).

■ Profile: Marco De Benedetti - By Michael Dempsey

## Energetic and nimble newcomer

Marco De Benedetti is managing director of Olivetti Telemedia, which exists to exploit the convergence of telecoms and data transmissions.

to develop local cabla networks

arco De Benedetti, one of three sons of Olivetti chairman Carlo De Benedetti, manages Olivetti Telemedia. Family successioo is not a common feature in the FT industry, but then, the technology world is still a newcomar in terms of

industrial history. The 34-year-old Marco owes his MBA and early experience to more traditional husiness institutions in the US, including Procter and Gamble and New York investment bank, Wasserstein. This type of background usually produces a distinctive product, but Marco De Benedetti bas emerged unscathed from an immersion in formal American business

practice. Sporting brown suede shoes and toying with a mobile phone in a display of impatient energy, he is recognisably

Telemedia is a multimedia Olivetti's Cambridge Laboraand telecoms venture that carries responsibility for Carlo De Benedetti's grand plan to steer the computer-maker away from the competitive personal computer market, with its ever-diminishing margins. Telemedia exists to exploit the convergence of telecoms and data transmissions. Tele-

has already notched up a string of significant international deals. Infostrada is a joint venture with Bell Atlantic that has gone on to establish an operation with France Telecom. This will create Italy's second fixed-line phone network, an alternative to Telecom Italia. Hughes Olivetti Telecom will market satellite telecoms services with Hughes This multimedia market-Network Systems, Videostrada is a joint venture with US West

tories are a hub of Telemedia activity: this is where much of the company's research into the emerging Asynchronous Transfer Mode, or ATM, techcology is based. ATM is per-celved as a crucial delivery mechanism in the race to get voice, data and visual images flowing down telephone lines and emerging coherently for commercial and domestic cus-De Benedetti is based in

Milan but visits Cambridge once a week. He is sanguine about what sounds like a hideously complicated acronym -"maybe ATM is not a nice word, but the concept is very simple. It provides a standard for multimedia applications.

place has an estimated value of



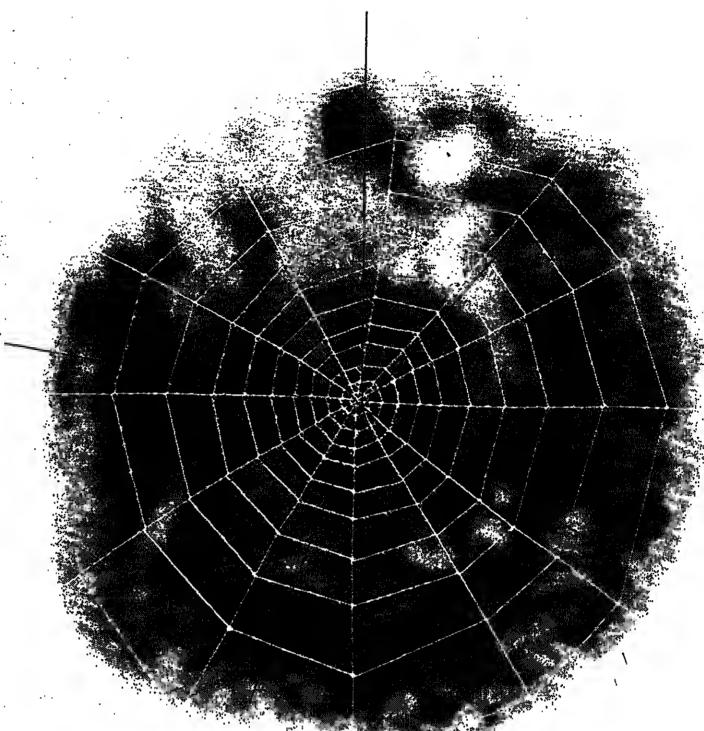
Marco De Beneditti. 34. claims that Telemedia. nimble enough to survive in an unpredictable world

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Digital systems reshape the working world

Here and on the following 12 pages, FT writers examine the impact of the integration of computer and telephone technologies

■ The advance of digital technologies - By Paul Taylor

## Raw power of the **Information Age**

The steady advance of digital electronic systems, based on the 'ones and zeros' of binary computer language, is sweeping away the remaining distinctions between data processing and telephony, leading to the dawn of a new information age, epitomised by the growth of the Internet

tgital technology has mada it possible to convert words, sounds, pictures and moving images into coded digital messages which can be combined, stored, manipulated and transmitted quickly, efficiently, and in large volumes without loss of

As a result, electronic commerce and the multimedia revolution are driving the computing and telecoms worlds into ever-closer contact, forcing two industries with traditionally different histories and cultures

to compete and co-operate. The relentless advance of semiconductor technology, the emergence of a personal computing standard and the shift to distributed computing and inter-networking are providing the raw power for the 'information revolution'.

tisation and liberalisation ts reshaping the competitive environment for telecommunications services around the globe. In response to the intensified competition and reduced margins on basic telephone services in biberalised telecom markets, network operators are building new computerdriven intelligent networks in order to offer a wide range of

Similarly, the growth of interest in mobile telephony reflects the impact of liberalisation and competition in many of the larger world telecom markats including those in Europe where the arrival of digital cellular networks based on the GSM (Global System for Mobiles) standard has prompted a surge of subscribers in markets such as Germany, Britain and France.

voice and data systems based on the latest low-earth orbit satellite technology, such as the Iridium system, hold out the prospect of truly global mobile telephony. Such systems may well be paired with in-office digital cordless systems to provide the ultimate in cordless connectivity. Outside the office, high speed modems, ISDN digital

elephone lines and the unprec edented growth of the home computing over the past two years has helped begin to turn teleworking into a real possibility for a growing segment of the workforce. Other technologies such as

cable modems, hybrid fibre/co-axial systems and ADSL which uses traditional twisted-pair telephone wires, offer the pros-pect of almost unlimited bandwidth to the home. These technologies foreshadow a looming battle between rival cable TV and telephone network operators over which systems will deliver video-on-demand, video games, home-shopping and banking and other interactive consumer services to the

Already, there has been a rapid increase in digital transmissions using coaxial and fibre-optic cables, wireless systems and satellites. "These advances in digital storage and transmission will deepen the convergence of industry sectors that, until recently, were considered quite distinct -communications, entertainment, computer bardware and software, consumer electronics and informational content," says Microsoft, the US software group, in a white paper called Creating the Global Informa-

"They will also create new

tha way companies service and institutions to create, purtheir customers," says Price Waterhouse in its annual IT chase or sell and use a new generation of ahundant elec-Review. However, the report's anthors note that "integrating tronic content - the beart of IT and business objectives the new information society." remains the number ona man-Digital technologies are agement issue as concern with

cost-control diminishes."

n Britain, the ratio of spending on mainframe computers to PCs is now 51:49 among UK businesses. compared to 60:40 a year earlier. As Mr Ekhard Pfeiffer. president and chief executive of Compaq Computer, the world's largest PC manufacturer, notes, "the pace of change in the computer indus-

try is dramatic". Today, the PC can be used as a telephone, a fax, an answering machine and television, a node of the office network or a gateway to commercial online information services and the Internet. In business, the PC offers an available, highly

affordable, and scaleable tool. For many traditional computer manufacturers, such as IBM, Digital Equipment, Unlsys and others, the changes

which have swept across the

industry over the past 10 years have resulted in a painful period of transition. With hardware margins

under constant pressure, some including Unisys and ICL in the UK - have decided to refo-cus their operations and have moved aggressively into the IT consulting, systems integration and computer services business which also includes the rapidly growing market for IT

The shift of focus to desktop PCs has thrown up a new group of computer industry leaders. These include intel. the US chipmaker whose microprocessors power the vast majority of the world's PCs, and Microsoft which bas come to dominate most segments of the software market with its Windows and NT operating systems and its Office and Back Office suites belped by a recent marked shift

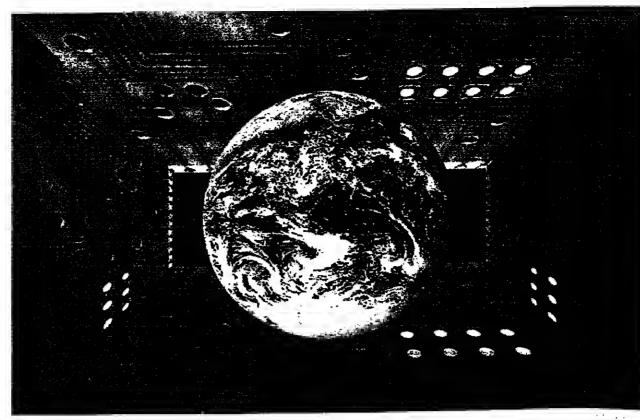
towards packaged software, Last year, more than 60m PCs were sold, buoyed by particularly strong shipments multimedia bome PCs which are growing twice as fast as their commercial counterparts. This surge of PC computing

power into the bome is setting the stage for a battle between the PC and the TV to determine which will emerge as the dominant multimedia and Interactive entertainment plat-

For people such as Mr Pfeiffer. there is no contest. Com-paq, which already dominates the market for commercial applications server, is predict-ing not only multiple PCs in the home, wired together with a home server, but also "a proliferation of computing platforms for communication, information access and enter-

tainment." Looking towards the end of the decade, Mr Pfeiffer says: "We see a world not just of basic connectivity as we have today, but also wide area information access and collaborative computing drawing on today's tools like Lotus Notes as well as new Internet tools under development.

"In sbort, we see a world in which everyone in a company will have access to and work from the same, totally refreshed data that represents what is bappening in the world



■ Electronic commerce - By Paul Taylor

## Fresh opportunities in a vibrant marketplace

Any network used for electronic commerce has to address security

he recent rapid growth of the Internet and internetworking has focused attention of the new opportunities for electronic commerce, not only as a means to cut costs and improve efficiency. but also as a way to tap into a new and vibrant emerging marketplace.
"Electronic commerce,

already developing in fledgling form on the Internet, opens up a range of new possibilities. It extends the reach of small businesses by enabling them to sell into markets they may never have dreamt of entering by conventional means," says a discussion paper prepared by Barclays Bank. "Plus, it may offer them the prospect of buying products and services from new suppliers in other parts of the world that they would not approaching.

Broadly, electronic commerce enables consumera to use a variety of on-line terminals and public or private electronic communications networks such as the Internet, to purchase goods and services from the comfort of their own bomes or wherever they happen to be. Although electronic commerce is in its infancy, some forecasters predict that It will account for as much as \$200bn in expenditure by the end of the decade

Electronic commerce requires three components: an online terminal, a payment mechanism and a public or private communication network to make purchases. Crucially. argues Victor Millar, president and chief executive of AT&T Solutions, electronic commerce requires "building a secure and stable system." This factor, be believes, could give telecoms groups - which have historically had to deal with these issues - an advantage over their upstart computer rivals.

Any network used for electronic commerce has to address key security issues to ensure confidentiality and authenticity and win the confi-

two main approaches to this using encryption techniques to secure existing payment methods or the usa of electronic cash such as Digicash, Cybercash and Mondex initia-

According to Kelly Knutson, enior vice-president of Visa International, any electronic commerce system will have to satisfy four basic security concerns; privacy of the data, integrity of the data, authentication of both the buyer and the seller and making sure that tha order is received and processed and verification is sent back to the buyer.

At the start of last month, Visa and its arch rival, Master-



Victor Millar: crucially, electronic

Card International, agreed to work together on a technical standard to safeguard payment card purchases made over open networks such as the internet. Before this, the two credit cards had been pursuing separate specifications.

Even ahead of this, the race to set up shop in cyberspace is on. Massachusetts-based Open Market, an Internet commerce provider, listed just 586 commercial sites in Its Web sites index at the end of September 1994. By the start of September last year, that number had jumped to almost 12,000.

According to a recently pub-lished NOP Research Group survey on commercial use of the Internet, more than 150,000 people in Britain have already used the Internet to purchase products and services in the

is still very much in its early stages as a commercial tool, said Rob Lawson of NOP, "but our research suggests that the volume of those willing to consider a purchase in the next six months is almost three times those purchasing in the last six

The Barclays paper says:

"Electronic commerce has the potential to challenge the business model - the relationship between banks and customers Banks will need to study the underlying value chain - how and when value is created and delivered to the customer - to identify their strengths and weaknesses in this new sce-nario. As the balance in delivery channels changes between branch networks and electronic networks, so the control of the delivery channel gradn-ally passes from the financial services providers into the hands of third parties. At the same time, the barrier to entry for new competitors - the need

Already the Internet has its first network-only bank. Security First Network Bank opened its virtual banking doors for business in mid-October. Forrester Research beralded' SFNB's debut as another Web wake-up call for the financial services industry." As Forrester points out, a bank's physical scale means

work - disappears.

little in a virtual world. Similarly, SRI International, another research firm notes: "the potential of the internet for Commerce is more farreaching than the vision of traditional electronic data interchange (EDI). Although speedler transactions and decreased paperwork are certainly part of this vision, conducting business on the Internet is ultimately motivated by a more fundamental concern - bringing the operations of a business closer to the customer.

"The Internet can serve a critical role in allowing companies to establish and maintain relationships with their clients. which in turn allows them to become more responsive to clients and to promote sales of additional products and ser-

'If you can't beat the Net, join it' to scrap plans for proprietary Commercial online information

services have suffered a high-speed, head-on collision with the Internet

ust a year ago, it was possi ble to draw clear distinctions between the Internet - an unregulated, chaotic but exclting new world of online information resources and the more structured environment of consumer-oriented online information services.

Today, with online services such as CompuServe, America Online and Prodigy all offering Internet access canabilities. such distinctions are no longer clear. The picture if further muddled by the fast growth of national and local internet access services and the development of branded Internet communities"

Convergeoce is bardly the best word to describe this rapid industry transformation. Commercial online information serrices have suffered ed, bead-on collision with the Internet.

The fallout is most clearly demonstrated by Microsoft's cision to redefine the Microsoft Network (MSN), introduced last August as a new online service, as an Internet-

aoftware designed to create multimedia electronic publica-

predicts Microsoft.

markets of the 1990s.

per cent in 1994/95.

already enabling companies

and other organisations to

improve productivity, acceler-

ate product cycles and compete

more effectively in the global

spending on IT, particularly

Reflecting this, corporate

elecommunications, continues

to grow rapidly. For example, a

survey conducted in Britain

among 1,000 IT executives in

leading UK businesses, by

Price Waterbouse, the accountancy firm, found that the

average IT hudget rose by nine

last April. As a result, telecoms

total IT spending, np from 6

per cent a year earlier. "The

sharp Increase reflects the

growth in computer network-

ing and in the integration of

telephone and computer tech-

nology, which is transforming

The commercial Internet - By Louise Kehoe in San Francisco

Spending on telecoms soared

45 per cent in the year to

account for 8 per cent of

Prior to the launch of MSN. established online information companies feared that Microoly in the market for personal computer operating system software to gain an unfair competitive advantage in the online information services arena.

Industry analysts predicted that MSN would quickly become the world's largest consumer-oriented online service The US Justice Department entered the fray by investigating the potential anti-trust implications of Microsoft's

Yet such concerns quickly evaporated as MSN failed to live up to analysts' expectations. In December. Microsoft announced that it had changed its plans for MSN and would. in future, direct its efforts at creating products and services built on internet standards. Bill Gates, Microsoft chair-

man and chief executive. acknowledged that his company bad been slow to respond to the rapidly growing popularity of the Internet and vowed put Microsoft in the forefront of the market for Intercet

Established online information services have also been forced to adapt. Prodigy, a

and International Business Machines, moved quickly to add an Internet Web browser to lts services. Compuserve

and AOL quickly followed suit. But the blending of Internet and proprietary online services has embraced Internet soft ware standards and is redefining Itself as an Internet-based service. This "if you can't beat the Net, join it" strategy is similar to Microsoft's new

approach America Online is hedging its bets. As the largest commercial online service with more than 5m snbscribers, AOL is not ready to succumb to the Internet frenzy. While It offers subscribers a link to the Internet with a high-speed Web browser. AOL remains a distinct entity.

established a new subsidlary through the acquisition of Global Network Navigator, a pioneer of Internet-based information services. GNN combines its own content and that of publishing "partners" with services aimed at making the entire Internet easier to use. GNN is "pitched to mass market America", says Lisa Gansky, vice president of marketing. "We aim to give users a powerful experience of the

The company has, however,

In the first three months after its launch, last autumn, GNN attracted more than 100.000 subscribers; its Intercet advertising "space", bowever, site is being visited by half a million people a month.

Compuserve has taken a similar "market segmentation" tack. In addition to its flagship online information services, a route to the Internet. Internet access service called Sprynet with unlimited time on the Internet for a fixed monthly fee.

This month CompuServe will also iauncb a new service called Wow! - aimed at the first-time online user who might be intimidated by the scope and power or the Inter-

#### Competition

Making use of its established network, Compuserve is offering local access throughout the US and in many other parts of the world. This puts it in beadto-head competition with US national Internet access providers such as Netcom and PSI. as well as local access provid-

As commercial online services begin to compete with Internet access providers, one of the critical issues is advertising revenues. While online advertising is a relatively new non, it is growing rap-

For online services, advertisinternet in their first hour ing represents an alternative source of revenue to offset the effects of intense price compe-

tain the interest of subscribers in their own information services, rather than being simply In this rapidly changing mar ket new developments include

strate their abilities to main-

the use of "content sensitive advertising in which online commercials are tailored to the interests of individual users by tracking the Internet sites that they vislt. Online services that can deliver large numbers of users to specific Internet services, such as internet directories, might also win a share in advertising revenues generated by those sites.

As the commercialisation of the Internet moves anace with the introduction of fees for access to electronic publications, online services also ser an opportunity to become the managers of the "toll booths' on the information highway. providing subscribers with "free" access for a set monthly

The outcome of this mark battle has yet to be seen. It appears, however, that market create high quality electronic publications may win the day. In this regard, the world of online information services is remarkably similar to traditional publishing media.

New services target home



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Galfine services - By Stephen McGookin

# Lure of unpredictable treasures

Lucrative potential for mass expansion is thought to lie in the mainstream commercial

services aimed at home users

Then considering the phenomenal recent growth in the market for online services, we have to distinguish between Internet access providers, of which there are now a couple of hundred in the UK alone; businessrelated information services, and the commercial proprietary networks which offer a range of content, such as CompnServe or America Online. The access providers - of which Demon Internet and

examples - have concentrated on low-cost connections for people keen to get straight to the Internet, while "the battla for desktop real estate", as Michael Bloomberg once put it, means that success in the highly-competitive, premium-priced business sector is measured in timeliness and volume of research intelligence.

There are a growing number services - PhoneLink's Tel-Me service, for example. which offers a wide range of travel and directory information - serving the personal and small business user. But it is the third grouping, the mainstream commercial services aimed at home users, where lucrative potential for mass expansion is thought to lie. The US Market research firm

Simba Information last year

predicted that the number of subscribers to consumer-based online services would increase by about 66 per cent to more than 11m worldwide in 1995 - with that number more than doubling by 2000.

CompuServe was the first commercial online service to make e significant breakthrough in Europe, its huge range of diverse, premium-rate subject forums initially overwhelming many first-time users, but nevertheless whetting their appetites for more ginative services.

CompuServa curractly boasts upwards of 3.5m members worldwide and says It is adding about 150,000 users each mooth. It has about 400,000 users in Europe, concentrated in the UK, France and Germany, and about 160,000 in Japan through an alliance with NiftyServe.

America Online - unrelated to either UK Online or Europe Oollne - ia probably the world's fastest-growing online service, with 7m users world-wide. It launched in the UK at the beginning of this year and in France this month in collaboration with German medie company, Bertelemann. It launched in Germany before Christmas, with regional con-

service available. Like Compu-Serve, access to the World Wide Web is integrated within

Prodigy is the smallest of the three leading US online networks, with about 2m subscribers. While content providers such as the Los Angeles Times may have forsaken it in favour of the Web, it says it has sdded about 200 conteot subject areas since April, which it may opeo to non-Prodigy users if it can work oot a charging arrange-

The swiftly growing America Online service now has 7m users

The Microsoft Network is the manifestatioo of the world's largest software company's ambitions for e global online earvice. It is available in 52 countries worldwide. Having ridden early industry and regutial market domination due to it being launched along with the new Windows 95 upgrade

software, it limited itself to an initial 500,000 subscribers. Delphi, launched in 1981, was

bought by Rupert Murdoch's News Corporation in 1994 and has about 140,000 subscribers worldwide. It is providing content including a link to The Times through its Web site (www.delphi.co.uk).
Apple's eworld, which comes

packaged with Macintosh com-Britain and the US in 1994, has about 90,000 subscribers.

Europe Online launched at Christmas with individual services for subscribers in France, Germany, Britain and Luxembourg, with regionally tailored content which restricts Web access to explicit sites.

ft is unlikely you will find anything like the "Live Nude Videoconferencing" - recently being touted oo various Internet newsgroups - by dialling up UK Online, which was launched in September last year and has specifically targeted family subscribers.

it claims that its research indicated that 64 per ceot of UK families would prefer British-based content over a USoriented service, and all of its subscribers are from the UK. A family membership costs £14.99 and provides four iodividual

for 'flat-pack' furniture. The images are created by the visual computing company, Silicon Graphics. DIY

e-mail addresses and unlimited use of the service facilities.

Again, UK Online's research told it that 93 per ceot of its adult users would prefer to bave parental control over what children might bave access to. It offers a commitmeot that the content it supplies will meet its "strict editorial criteria to ensure lts suitability for a family audi-

ence," while its system of parental control allows parents to specify what content chilhow much time they can spend online.

With content-providers considering their options between Web and partnership deals with proprietary services, the commercial online companies may have realised that their future is inextricably tied up with the free-access culture of the broader Internet.

But with estimates of the online industry's revenue pie usually including the word "billion", they trust the market will continue to grow for their value-added services in partnership with the varied, yet unpredictable, treasures of the

## Network security Operating under a cloud of uncertainty

Companies face a complex web of technical, legal and moral questions

he IT security threat has long been depicted in terms of wild eyed hackers hunched over terminals late into the night. But while there is real cause for concern about criminal activity over computer networks, large corporations are very worried about another threat to their use of electronic communica-

Meanwhile, government restrictions on the use of data encryption codes in various countries are limiting the ability of commercial organisations to protect themselves.

Cryptography is at the heart of this dilemma. Governments all over the world rely on specialist intelligence units to break down data transmissions from other nations and individuals while encrypting their.

The US National Security Agency and the UK's Government Communications HQ are the best-known of these agen-

The NSA is notorious for obsessive secrecy. Meanwhile, in the UK, the GCHQ has lifted its traditional reticence in recent years to offer advice to British companies concerned with data security.

Mr Roger James, chairman of Cheshire-based communica-- tions software specialist Boldon James, has worked with GCHQ to define data standards for UK government departments. Mr James plays down the cloak-and-dagger imagine of GCHQ, but instead ha describes his contact with its staff as "horribly technical". He also portrays the Chelten-ham code-breakers as "very down-to-earth people".

There are two ways of ooking at security, he says which means accepting that perfect security is impossible to obtain. The other is the Ivory Tower approach, which involves dreaming of a world in which security is absolute. There are a lot of 'practicalists' in GCHQ".

Mr James, whose clients include the Britannia Building Society and the German Navy, is active in the European Electronic Messaging Association. He is concerned at the lack of a co-ordinated European policy on encryption. And he fears that effective security measures could become illegal with the advent of future legislation curbing the availability of encryption software.

t is illegal at the moment to use strong cryptography L techniques in France without first depositing the key to unlocking your codes with the French government UK companies developing sophisticated security programs find their software classified as munitions and subject to tight export restrictions, even

within the EC. in the US, the author of strong encryption program, called Pretty Good Privacy', found himself facing a Grand Jury and possible charges of exporting prohibited technology. The NSA has proposed that all personal computers made in the US contain the Clipper Chip. This security feature would give the NSA easy

access to any data communica tions, however the user chose to encode it. The proposal is currently stalled, having met with ferocious opposition.

Both suppliers of information technology and industry at large need to clear a path through this international maze. The legal structure surrounding the use of encryption technology is of particular concern to anyone working in electronic commerce.

The Clipper Chip debate raised a fundamental moral issue," says Mr James. "Software technology means that strong encryption, previously available only to the military, can now be obtained by the public. If governments then find messages hard to break, it leads immediately to a conflict

ne company that has confronted this apparent conflict of interest between state and commerce with its attendant uncertainty, is the Anglo-Dutch oil giant, Shell. Mr Nick Mansfield, a Shell technical consultant specialising in information security, says the company is enthusiastic about the potential for eliminating paperwork across its sprawling global operations - "we are committed to electronic trading," he says. "We have a vast electronic-mail network. But there is still a section of our business where we have to use paper".

Contract agreements are at issue here. Until security can be absolutely guaranteed, bilateral agreements must be seen to be tamper-proofed. Shell is about to deploy technology to secure personal computers and PC servers across the world. This e-mail security eystem will cost around £1m in software purchasing plus £100,000 a year to run. It will have 4,000

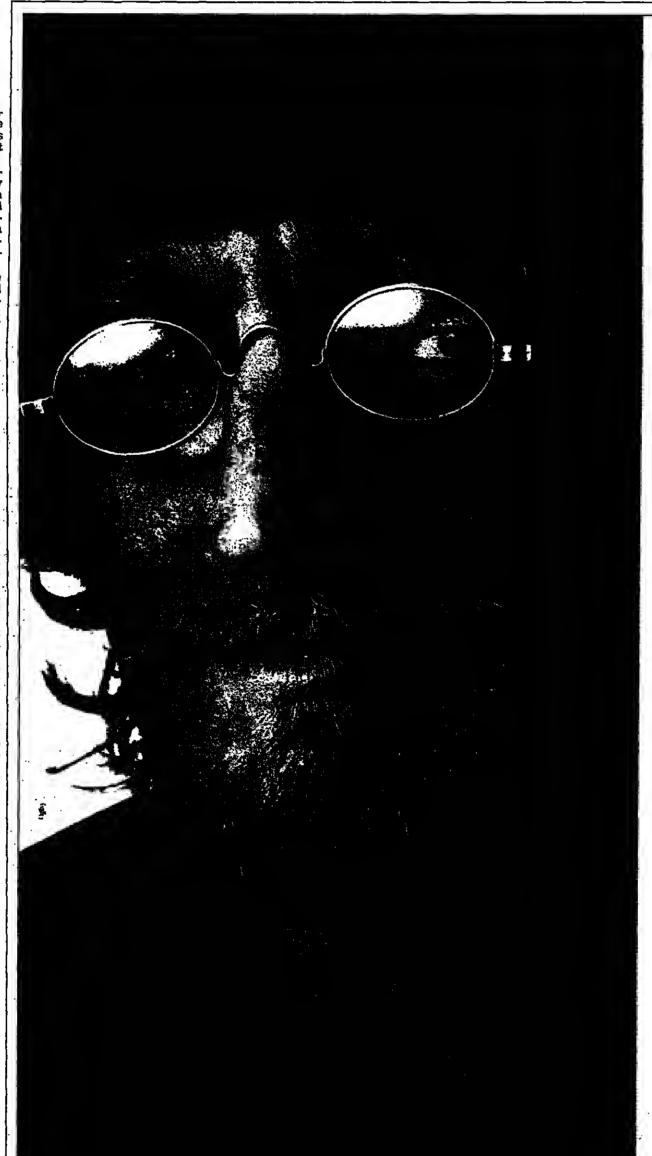
Far from escalating costs, Mr Mansfield explains that expenses are falling as security improves. Shell used to run a secure telex network that cost £4m in technology and required 2200,000 a year to support 120 sites. This was superseded by a secure fax network costing film in systems, plus 2100,000 in annual maintenance for 200 sites. The latest system will expand secure saging beyond the fax network's remit.

But setting up this security system involved Shell in a long and involved process. Its chosen security software is subject to close scrutiny by the UK authorities, who worked with Shell to customise the program before it could be released for

While Mr Mansfield is pleased that Shell's security system is so strong, it required an export licence and he echoes the concerns of EEMA's Mr James - "it's a cart and horse situation. Until governments agree on policy and relax some restrictions, industry won't be encouraged to development extreme standards of encryp-

There needs to be a broad European debate on this issue. Until this complex web of technical, legal and moral questions are resolved, secure commercial data networks will be operating under a cloud of

Michael Dempsey

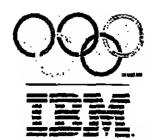


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# Case study: converging services Host to the London Internet Exchange

When computers and communications are brought together in the same location, all sorts of synergies are created. Rod Newing reviews what happened in the London Telehouse

he London Telahouse deep fibre optic cable links to was built in Docklands three years ago to provide a highly secure environment for city mainframe computers, as well as providing disaster recovery and business continuity services. This impressive huilding within two miles of Canary Wharf - has been designed to provide the highest possible level of protection against flood, fire, bombs and sabotage.

· Power and communications facilities are just as important as physical security and the London Telehouse has multiple back-up aystems. There are two separate high voltage links to the National Grid, two generators and a battery room.

There are telephone links at each end of the huilding, feeding through separate lines to six BT exchanges and four Mercury ones. Each line is backed up hy several other lines and there are duplicated er with a secure physical envi-

clients in the City of London. There is also a "teleport", equipped with microwave and satellite wireless data links.

Despite Telehouse having a target market of city institutions, one of the early tenants to move equipment into the huilding was Unipalm Pipex, Europe's largest Internet service provider. They established a point of presence, using a link to Telebouse America, a similar secure building, to offer Internet access to the US.

"As an Internet provider. you need to put servers and equipment as close to communications facilities as possible," says Keith Mitchell, Pipex International's head of engineering. "In the US we can put our equipment into telephone exchanges, but that solution is not available in the UK. Telehouse offered us the necessary communications links, togeth

ronment for the equipment." As internet usage exploded, Pipex was soon joined in the Telehnuse by more international telecom carriers, as well as other Internet providers. It is here that Pipex locate their WorldServer, a powerful Sun server which is one of the larg-

est Internet servers in Europe. "In order to provide a resilient site for computers, you need first class communications links," explains Tele-house Director Kevin Still. "The Internet providers depend on international carriers and were attracted to Telebouse by the presence of BT, Mercury and Sprint. As the Internet use expanded, more carriers were attracted to the huilding because of the Internet providers. This created a virtuous circle of carriers and Internet providers attracting each other.

There are now 15 international carriers in Telehouse. including all five domestic carriers. So far, 17 Internet providers have become tenants. including all five "backbone" companies. Telehouse oow carries 85 per cent of Internet traffic between Europe and the US.

"We are ready and willing for all traffic to come through

here," says Mr Still. "The vices where they and our other building design is ideal for this service. We want to locate all other." Internet providers and carriers in the same building to create an important gateway into Europe and the US. It will also

rium of communications sar-

provide a competitive empo-

An interesting opportunity provided by the Telehouse was the creation of a UK interconnect point the London Internet Exchange (Linx). It is a broadhand fibre local area network



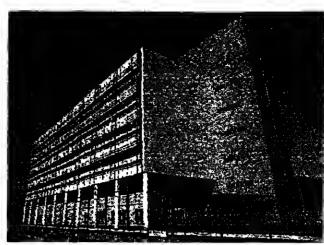
Bomb damage in the City of London: financial institutions are acutely aware of the need for secure IT back-up facilities

between the 17 different Internet providers within the secure physical environment of the building, allowing then to share their capacity.

"This is a major service to the Internet user-community, but it is only possible because their servers and equipment are located in a common neutral environment where they are treated equally," says Mr Still. Although they are a shareholder in the building, BT are treated at arm's length by the building managers.

The presence of all these carriers and Internet providers brings the other tenants of Telehouse a big benefit: they bave a wide choice of international point-to-point and Internet suppliers with whom they can connect. Most importantly, they can make their connections through a local cable in a protected duct within the building, rather than in the street where it is vulnerable to

Telebouse promotes competition by giving good connectivity between different computer networks," says Mr Mitchell. "Unfortunately, it's unique in Europe and we need





Banking applications - By Alison Smith

# Still a long way to go

Banks seem more interested in evolution than in revolutionary

ith millions of customers who instructions and systems that they cannot afford to go wrong, it is scarcely surprising that many banks are not at the cutting edge of information technology - although the financial world has long been one of the largest investors in automa-

The banks recognise the transformation IT has already Svide services to customers. They also acknowledge that further developments will . bring about even more signifi-

cant changes. It will mean both challenges and apportunities. So far as one financial technology expert is concerned, one important element is that the demand to provide services around the clock will put increasing pressure on some UK banks' main computer aystems, requiring

their upgrading. "TSB already has a real-time system, but Barclays still has a batch processing system." he says. Banks with batch processing which are offering 24hour services and allowing customers to use them hy personal computers and smart card. technology, will have to rethink their systems."

Mr John Sturgeon, business development manager for customer banking at ICL Financial, sees a more fundamental issue facing the banks over the next few years. As the Internet, and other networks, become more accepted as ways of transacting business, then the question arises whethar



Big question: as the internet and other networks become more accepted as ways of transacting business, will the parties involved still need a made, both in banks' internal bank to carry out the transaction?

the parties involved need a bank to carry out the transac-

tion: "Transactions could go across the Internet from customer to supplier, with the bank just acting as custodian and not doing the transaction itself. The traditional role of banks could disappear."

He believes that the availability of hundreds of televisinn channels within n few years could also pose a threat to the banks.

Using these TV channels should lower the costs of entry to the personal financial services market, making it easter for non-banking organisations to offer financial products, perhaps creaming off the extra higher-earning services without feeling obliged to offer the basic money transmission facilities, provided by the high street banks.

taken place, some changes are

still in progress. UK clearing banks, for exam-

A Interview with Marco De Benedetti

For the main UK banks, however, the accent is much more strongly on the opportunities that technological developments can provida, both in thair own internal processes and in terms of what they can

While much restructuring of banking processes has already

ple, are in the process of shifting to a new system in which the details of cheques can be read and transmitted electronically, and the cheques themselves do not have to be presented at the bank branch on which thay are drawn. Most other European countries have already adopted this approach. Mr David Guest, manager of electronic commerce at Mid-

land Bank believes that the widespread use of document image-processing could be the next important change for banks. "At the moment we're still shuffling immense amounts of paper. The cost of image processing is only now becoming affordable, but there is great potential for speeding up processes and access if every document is scanned on arrival in a hranch or office." he says. "Wa could make fan-

tastic savings." Mr Gordon Pell, general manager of retail operations at the Lloyds TSB Group, says

that the electronic transfer of information - "the electrification of the back office" - will contribute to the widely-expected shakeout in the banking sector, as thousands of lowskilled jobs disappear.

Mr Steven de Looze, a senior executive in new delivery channels at National Westminster Bank, believes that technological developments could transform the delivery of products and services. Alongside the commonly-

held view that increasing use of the telephone and the prospect of providing services through customers' televisions and personal computers, be sees a role for the banks in providing information services to husiness customers, perhaps cially in developing for smaller businesses. "I think there is a large mar-

ket in providing or broking husiness-to-husiness services." he says. "There are already a number of service providers, hut there is no reason why banks should not act between information providers and husinesses."

The focus within the banks for changes in delivering services to customers is not so much on ground-breaking ideas, as on developments that allow services to be provided more cheaply or more accessibly. Despite the advice from some technology managers that IT developments will revolutionise the banking sector. banks themselves sound more interested in evalution.

"Although some things will happen very fast, in general, banks bave to have a lot of trust that when they do things electronically, they do It well. That requirement will slow down the pace of change," says Mr Guest

Developments in home banking and multimedis in finance: see Page 10

Science Museum goes online

### Vith more than 200,000 objects on display relating to science, technology and medi-cine, the Science Museum in London attracts more than 1.4m visitors a year. But now, with 500 Web pages set up no its Web Server, the museum has the potential to attract millions of Internet "browsers" to access its vast

edocational resources. Net browsers around the world can call up information ranging from the history of flight to conferences on issues surrounding genetic screening. International users are now downloading 60.000 files a week.

The museum is really one of three, which together with the National Railway Museum in York and the Museum of Photography. Film and Television in Bradford, make np the National Museum of and Industry. Each venue is computer-linked via an open systems network, installed hy Data General, the hardware company largely responsible for the Science Maseum's developments in cyberspace.

## Wide choice

Alistair McLaurin, the museum's IT manager, says more than 40,000 "virtual visitors" logged on to the musenm's server in the early months of this year. A trip to the "virtual museum" takes visitors through a chuice of galleries one popular tour is called "Treasures of the Science Museum".

More than a third of the "virtual visitnrs" this year come from schools and educational centres. As more schools become connected. the museum is faced with the challenging of expanding its traditional remit to a new and much wider community," says Mr McLaurin.

"The 'virtual museum' is just a part of what we will soon be calling 'virtual educa-

# The 'virtual museum becomes a reality

New London project shows how the Internet is helping to reshape the face of education and research



Engine on the Internet - and in the background the original machine, invented by Charles Babbage (1792-1871). Babbage, called 'the parent of modern computing' was a self-taught professor of mathematics, who with a colleague, Ada Lovelace, designed the famous machine to help calculate vast numbers of logarithms.

to the current educational cur- from the displays." riculum," he adds.

In spite of the Internet links. the online services will not replace "real" visits to the

"Researchers, schools, tourvisitnrs from, say, Manchester

Mr McLaurin is confident that and communicate via elec-

ists and families will always want to experience the real thing," he says. "But a virtual musenm does allow distant tinn, which is also a challenge or even Mexico, to benefit

Within the London museum,

240 users can also surf the net tronic mail. The aim is to increase these internal facilities to 400 Internet users this year. More than 300 groups visit the musenm each day during term-time. Visitors can also take a "virtual side step" and visit galleries at other

maseums around the world. "Projects such as the virtual

museum are very much at the cutting edge of the information revolution," comments Mr Mike Maunder, marketing director of Data General. The Internet, he adds, is "helping to reshape the face of education and research".

The Science Museum's Web pages can be accessed on: bttp://www.nmsi.ac.uk/

Michael Wiltshire

## Multimedia partnerships

£800m. But technology has a nasty habit of veering off in unexpected directions. Da Benedetti's point about ATM is that it is merely an enabler, if a business concentrates too hard on the bits and bytes of one invantion it might lose sight of the bigger picture. De Benedetti cites IBM's pur-

chase of software giant Lotus in order to gain the Notes groupware product. With the surge in Internet usage, many work groups claim you can get Notes facilities from joining the World Wide Weh. In De Benedetti's view, that raises questions about the price IBM paid for Lotus - "the Internet arrives ... and throws \$6bn out of the window".

De Benedetti claims Telemedia will be nimble enough to survive in this bewildering and unpredictable world. "In our industry it's certainly been the case in the past that leaders in one generation didn't stay at the top," he says.

The challenge is to maintain the momentum of change, and he has no illusions about that

"To transform yourself is very hard. Olivetti was born 80 years ago as a typewriter company. Then it became an electric typawriter cnmpany ... then it changed into a

personal computer company. All of those moves were traumatic for the management." Today, De Benedetti charac-

terises Telemedia as the mechanism hy which Olivetti will effect the next transformation. If it boasts knowledge inherited from Olivetti, the company will also have sober ambitions dictated by De Benedetti. Infostrada will develop the

Italian phone market, but for moves outside of its native territory Telemedia is quick to recognise the resources of third parties. "I don't believa in glohal operations without partner-

ships," he says. Hughes was chosen as one partner for its unquestioned knowledge of the satellite business. "It has a 70 per cent share of the world market. He points out that once you are relying on satellites, mar-

kets are not denoted by political, economic or demographic houndaries. "Your market is determined purely by the footprint of that satellite's broad-

## **loint ventures**

He appears wary of setting too much store hy any one management strategy. But Telemedia is an example of De Benedettl's balief in "very focused centres of competence". The proliferation of affairs slip past him. Telemedia joint ventures illustrates this bellef: "It was a deliberate choice to go for separate organisations, in each case. That way you get the best from each partner." Pressed on his own grasp of

the intimidating and obscure technology that underpins Telemedia's afforts, De Benedetti displaya a remarkahle honesty: "I'm certainly not a technical person. Actually, I'm quite ignorant about that side of things. "But I do understand where

tha world is going. In the future there will be information and telecoms companies, but the concept of computer companies will be a little blt This swift reversion to the broader view could have come

from the lips of his father. Carlo De Benedetti never loses a chance to speak of Olivetti in terms of political and economic developments beyond the ken of IT specialists. Marco De Benedetti, in fact,

displays many of his father's characteristics. While aides look weary at the close of a long day's briefings, he is still restless and eager to press on with business

Much has been made of his youth. But Marco De Benedetrefusal to let any Telemedia a war to fight."

His father once made a celebrated attack on Italy'a Fiat dynasty, the Agnellis, declaring: "You can't be an industrialist and a playboy. It's inconsistent."

Telemedia clearly takes its cue from an industrialist. One of Marco De Benedetti's two brothers, Rodolpho, works in an Olivetti holding company.

The other brother, Eduardo, is a medical doctor. Marco is open to critical

feedback from the family member who has ventured beyond the IT sector. "Eduardo is a user of technology, He tells me it's still too complicated - and he's right. We in the IT industry talk about systems being user-friendly. But we are too close to the products. Really they are very far from being user-friendly."

Telemedia's assorted multimedia moves will sink or swim on public acceptance. De Benedetti knows that complacency is the high-technologist's worst enemy. Ha refers to the thriving provider huys "backbone"

night to challenge old certaintles. "There are lots of challenges ti's energies spring from a ahead," he says. "There's still

Internet company, Netscape, as

typical of new companies that

can emerge practically over-

## News in brief

## Directory of Internet service providers across Europe

the Internet may wish to explore a CyherRoad map before starting their information superhighway journey, writes Marcia McLeod.

Users and potential users of

Developed by the European Electronic Messaging Association (CEMA), the CyberRoad maps create a directory to Internet service providers.

EEMA aims to provide information on more than 290 Internet service companies throughout Europe, exploring relationships between providers and detailing speed of ser-The number of stops a mes-

sage makes on each supplier's network, and the length of time it takes to transmit a message, are highlighted. Supplier reletionships are important because they could affect the speed of transmission. For example, if one service space from a different provider,

the message sent by the Internet-user may have to travel their organisations. through two parts of the network, thus taking longer or costing more in the process. Customers may be better off going direct to the primary ser-

vice provider. The CyberRoad maps also indicate whether the The survey finds that the service provider accepts commercial traffic, as some are designed solely for academic or other non-profit purposes, and

service speaks. ☐ The CyberMaps are free over the Net (http://www.morketplatz.ch/ Eurointernet/), or cost £150 for print versions; details via UK telephone: 01366

wbat European language the

## Big increase in the use of Lotus Notes

The use of Lotus Notes. IBM's unique groupware technology, will grow by 217 per cent in 1996, resulting in it being installed on 20 per cent of corporate desktops, writes Rori Newing.

This is one of the findings from the fourth annual survey carried out by the Lotus Notes Users Europe, an independent

user group.

The explosion in the use of Notes is partly caused by the reductions which IBM have allowed Lotus to make in the price of the Notes client. This has encouraged existing users to make Notes applications more widely available within

IBM claim that the cnts have given market share without affecting profitability. This has resulted in the sale of more Notes client licences in the last

six months than in the first six

greatest threat to Notes is the Intranet, an internal World-Wide Weh. However, Notes Release 4.0. launched in January 1995, provides full integration with the Internet and Lotus believe it will compete effectively with the Intranet by providing a fully intagrated environment with stronger support for interactive applica-

Results from the survey were recently quoted by Ray Ozzie. the inventor of Lotus Notes, as "the most comprehensive and detailed analysis" of Notes'

usage he has seen. The figures for Lotus Notes users are:

November 1994 .... ...... 900,000 January 1995 ..... ..... im 2.2m June 1995 ..... Sept 1995 ..... . 3.3m January 1996 .... ..4.5m December 1996 (forecast) . 7.6m □ Contact: Lotus Notes Users

## Information on electronic commerce

Europe: tel. 44 (0)171 917 2805.

A new World Wide Web site has been set up to offer information on all forms of electronic commerce - EDI (Electronic Data Interchange), electronic mail and trading over the Internet, writes Marcia MacLeod.

Called "Year-X", the service explains what electronic commerce is and how to implement it; there is news on products. services, standards and associ ations: plus case studies and views from the industry and users. It also maintains a directory of companies providing an electronic commerce product or service.

Visitors to Year-X may also "hot link" - transfer to another site - to the home page recently opened hy the Electronic Commerce Association, formerly the EDI Association. This offers information on the ECA plus details of forthcoming electronic commerce conferences.

http://www.year-x.co.uk; tel. enquiries: 01271 870008.

□ Year-X's Web address is

## Parents look for guidance

Despite worries over pornography and lack of parental control, 51 per cent of parents in the UK would like their child to have access to the the Internet, according to a new report from Compaq, the computer

company. More than two-thirds of parents (69 per cent) believed that a home computer would improve their children's education, hut one in three were concerned about the Internet's "unsuitable material" available to children

# **Opportunities for innovators**

The growing influence of theInternet is part of a deeper change in the Vans market

The inexorable rise of Internet communications is changing the face of value-added telecommunications. In the post, suppliers could add value to basic telecoms in a number of ways electronic mail (e-mail), electronic data interchange (EDI). directory services and so on. However, when a new breed of value-added vendors came along offering Internet access. the so-called value-added network services (Vans) market

Internet-hased communications services are eating into the traditional Vans suppliers' revenue base - leading them to diversify. The e-mail market is the first area to feel the effect. You can already see the influence of the Internet on e-mail services," says Mrs Jolanda Goverts, editor of the Ovum news service, Vans Markets Europe. "Gateway access to the network is expected to generate the major growth in the next few years and the Internet will account for 25 per cent of it. Between now and 2000, we estimate an annual growth rate of 90 per cent for e-mail services through Inter-

But it is not only traditional e-mail services which are awitching to Internet-based communications. Many kinds of transactions are being diverted from traditional communications services to the Internet, A recent report from Forrester Research expects Internet-based transactions to double by 1997. It says that in the next year, three-quarters of Fortune 1000 companies are expected to move from the current use of the World Wide Web (WWW) - as an extension of the marketing department

to using it for real business. This assumes a significant rise in Internet "transactions" other than conventional e-mail messages. Chiefly, the increase will come from electronic "orders" for goods and services and electronic payment by But it is unlikely to have any impact on interbusiness electronic document interchange (EDI) - another key area for Vans suppliers.

At present, conventional Internet-based e-mail services are neither secure enough nor robust enough to carry this type of business transaction. This is reflected in Ovum's research: "There is nn detectable influence on the EDI market because people don't see the Internet as being reliable enough yet. Businesses are sticking to X.400 connectivity because it is better technology. It gives message acknowledgements and so on," says Mrs Goverts.

The X.400 specification is an international standard for electronic mail which provides for secure and rellable transmissions of messages across a network, An X.400 gateway service gives businesses access to this as the foundation for secure husiness communica-

Gateway services are a traditional source of revenue for Vans suppliers. In the past, the bulk of the revenues have tives to X.400. But the balance is shifting. According to Ovum,



for members of Online UK which offers a range of program newswire, hobby clubs, health and fitness fe horoscopes. Family membership costs £14.99 a month

revenues from X.400 gateway services in Europe are expec ted to overtake revenues from proprietary services by 1999. X.400 is expected to grow at 67 per cent a year up to 2000, says Mrs Goverts: "Vans suppliers are moving to X.400. BT in the UK, for example, provides internet services. But although it is not promoting it. it recommends X.400 for com-

merce. It is also worth noting

Internet, hut it also provides

is being felt in the world of EDI however Mrs Goverts notes that businesses in Finland use the Internet for EDI because "awareness is much higher". There is no evidence to suggest that other European countries will follow the model in Finland - but at least it suggests that it could be a possibli-

The growing influence of deeper change in the Vans market. Deregulation and

increased internationalisation of the telecoms market has made aome markat sectors unprofitable. Basic telecoms services, for example, are better provided by the large suppliers: "It is a defining moment for Vans suppliers. They can't compete on the basic network services - running networks is not where they can add value any more," says Mr Chris Gahan, a data solutions manager at BT.

They have to move away from the plumbing and find ways to add value with things like project management and managing ontside services like virtual private networks," he

Mr Clive Curtis, product manager at services supplier MFS Communications, agrees: "Our primary business is in supplying virtual private networks for business. Modern networking technology is comthe expertise to serve our customers. We see our potential In providing management services for networks - expanding outwards rather than unwards into the application-specific

He coes on to say that MFS sees great potential in what he calls "total area networking":

"There is a gradual evolution towards total area nets especially now we have got rid of the hottlenecks in the wide area networks with new technologies like frame relay," he

There is no doubt that the new communications technologies and advent of the Internet have shaken up the Vans market. But equally, there are still those suppliers prepared to

# ■ Virtual private networks - By Philip Manchester US companies are leading the way

Changing work patterns are a big incentive for companies to install VPNs

he convergence of computers and telecommunications has opened the door to new ways of communicating. Traditionally, telephone systems are 'hard-wired'; the functions they perform are built into the hardware. But with computerisation, modern telephone systems are, increasingly, 'soft'. They can, for want of a better term, be 'intelli-

Modern features we take for granted - such as itemised hilling and call-redirection - are possible because of the 'intelligence' of modern telecommuni-

Virtual Private Networks (VPN) are another example of the same phenomenon. Software technology allows telecom suppliers to provide individual companies with thair own private network, using the standard public switched network. This means, for example, that an incoming telephone call can be re-routed to another employee of the same company, regardless of geographic

Although the concept of pri vate networks has been around for some time, they are generally based on dedicated, leased lines. VPN looks the same as a dedicated network to users but it is hased on conventional iblic networks.

"Companies have two options for enterprise networking. They can go for a managed service-based on a dedicated natwork or they can go for VPN," says Mr Jeff Ace, director of IBM Global Networks.

"VPN has all the attributes you need for an enterprise network - but it allows you to go your own way with familiar a network and get the economies of scale which come from using the public switched telehave, of course, been around since the early 1970s. They have given large companiea the ability to view their telephone networks as single resource - both for voice and data traffic.

Since the mid-1980s, when Sprint and AT&T launched the first VPN services in the US, a growing number of corporations have opted for the VPN approach. The result is that the US is the most mature man ket for VPN services. According to a recent report from market researcher Ovum, the US market for VPN services in 1995 was \$3.6bn.

Because of the maturity of the US market, only moderate growth is expected between now and 2005, when the market will be worth \$5.5hn.

The picture is very different outside of the US. Ovum puts the market in Europe and Asia Pacific at \$10m last year, rising to \$7.9bn by 2005. There are several reasons for this growth: telecom companies want to cut costs and one way of doing this is to move their large corporate customers from dedicated networks to the public switched network.

A technology, which makes VPN viable, has improved. "We are investing heavily in innovations such as frame relay technology which gives much greater and more flexible bandwidth," says Mr Ace of IBM.

t the same time, the

This technology not only speeds up traffic on a network, it also allows traffic - specifically voice and data - to be

"Companies are going to VPN because they are looking to consolidate or expand their networking to meet changed work patterns. VPN covers both voice and data," Mr Ace explains.

Changing work patterns are another significant incentive for moving to VPN. "Buslnesses are recognising that they must become more cus-

sales are among the main change agents," says Mr Chris Gahan, data solutions manager

"In the 1980s, companies tended to rent private circuits. But now they are looking for different kinds of function from their networks and VPN offers a better option. Traditional telecommunications were inward-looking. Now it is important for companies to look outwards. The type of network traffic

that businesses need has changed, he adds. "The traditional operational systems that companies use are based on transaction-processing with predictable traffic levels. This suits the private circuit services. But companies today need more flexibility and a network to handle peaks and troughs. The private circuits can share bandwidth and is better suited to the new environment where you need a hland of services."

VPN also offers other ben fits: "The 'technology charn' is still with us and companies want to protect themselves from change. At the same time, new skills are needed - as with any fast-moving technology. VPN can insulate companies from the need to keep up with the changes," says Mr Ace of

At BT, Mr Gahan also points out that VPN "allows companies to scala their networking needs up and down more easily and they can derive cost-benefits" from sharing a large telecoms resource. In many ways, VPN is a natural progression for business telecoms. Provision of networking services whether for voice, data or a combination of both - is a utility and, therefore, not part of 'core' business activibles.

The nature of the global telecoms market means that prices will be competible and it will make sense for many mediumto-large organisations to opt for VPN. For once, the interests of suppliers and customers

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almost entirely online, ventur-

ing out to buy stock and to

post the books sold. If they

relied on retail trading they

to me as to anyone else," says

Mr Watson. "And it's as easy

for me to buy from them as it

is from aomeone down the

road. Ultimately, this means

that more people are getting

more of the books they want.

and that encourages further

It can only be good news for

J R Hartley and other, less

mythical, writers, it is also

good newa for booksellers.

Every bookseller that I've spo-

ken to who uses the technol-

ogy reports increased sales."

☐ For more information.

concludes Mr Watson.

reading and book huying."

"It's as easy for them to sell

would not exist.

www.cityscape.co.uk/us. ersids36/ □ Kennu's Bookshop sells new, second-hand and antiquarian books of Irish interest: http:

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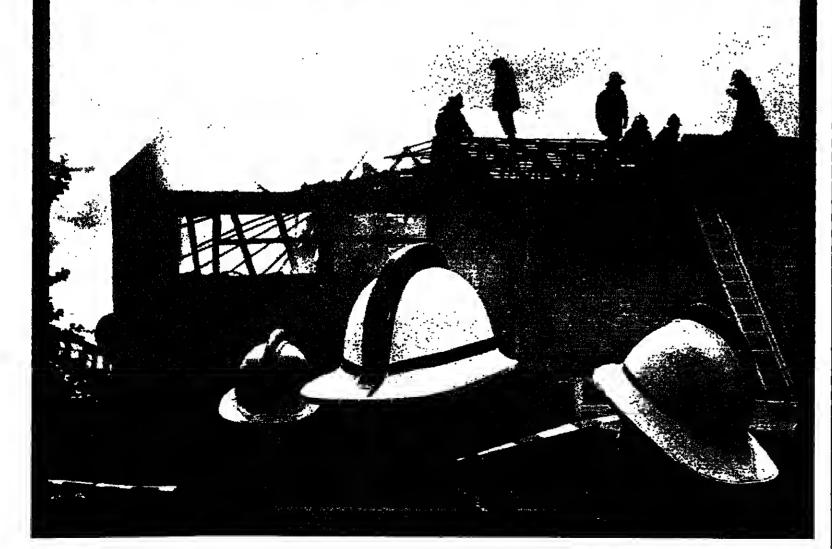
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# How the Internet boosts book sales

Searching the Net: - By Joia Shillingford

The slowest thing is the actual physical shipment of the books from source to customer

orget thumbing through Yellow Pages to find Fly Fishing by its author, JR Hartley - a familiar, nostalgic theme in many television adverts for Yeliow Pages in the UK. Today, the cool way to search for second-hand books is via the Internet.

No-one knows this better than Glyn Watson, whose bookfinding business has expanded since he went online a year ago. "The Internet is the friend of the printed word, not its death-knell." says Mr Wat-

His Shropshire-based business. Glyn's Booksearch, can only be reached by single-track road, yet he can search for outof-print, second-hand and antiquarian books anywhere in the

In many ways ha is a classic example of the new breed of Internet professional. "I ait bere, like the spider in the middle of a web," says Mr Watson "finding books in North Carolina and having them shipped to Japan - all using electronic

Somatimes Watson uses databases accessible via the Internet to search for books. Even when more traditional methods of book-searching are involved, electronic mail via the Internet (the global e-mail and information network) often plays a part.

"I may use an online database of over a million books located in the North West of America to find a book for a customer 20 miles from here, says Mr Watson. "Or I might use slower, though reliable, UK trade press advertising sources to find books for a customer in Australia

"I collate a large and detailed list and e-mail it to her in seconds; so old and new mix

The Net helped Mr Watson find several volumes of British 19th century poetry, in sumptuous decorated bindings - for a UK customer. The volumes were scattered all over tha US. Or he might buy books in the UK but send a quote by e-mail



to the Yellow Pages for those searching for second-hand books

anywhere in the world.

Mr Watson belleves that those looking for out-of-print books now have a far greater chance of getting what they want simply because of the asing number of Internet links among members of the second-hand book trade - with international frontiers heing The slowest thing is the

actual physical shipment of the books from source to customer. Even thet can be overcome. Mr Watson recalls: "I had a call one afternoon from someone needing an obscure academic title within days.
"Minutes after ha'd called

using online resources - I'd located one copy in a small Virginia bookstore. A phone call secured it and it was on its way hy airmail - all within half an hour of the original request to me." With variations, that's not

an exceptional story," adds Mr Watson. Credit and debit cards and electronic card readers simplify payment. The US is ahead in electronic bookselling, according to Mr Watson: "Many booksellers which carry extensive stock and are essentially retailers (not book searchers) are in places so remote, they make Shronshire look like Oxford Street."

Some of these dealers trade

rnet

Meson of March

onic commen

# Converging technologies - interactive services

Fideo-on-demand - By Philip Manchester

# More than 'Hollywood online'

The first lessons about 'Vod' services are being digested. Progress towards a world of interactive TV is under way

Toldeo-on-demand (Vod) Paul Taylor's report, below.) services are about instant access to the latest blockhuster cinema films through the telephone network. But although this is the first image to come to mind when Vod is mentioned, the service is about a great deal more than "Hollywood online". Reports on Vod trials in Europe and the US emphasise access to films in order to draw attention to their experiments.

But behind the special set-top computer which delivers Vod to the home TV lies a vast and growing infrastructure. The experiment is as much ahout testing the technology which delivers the services as it is about finding out how peo-

ple will use them. First of all, simple Vod is not likely to be a big money spinner for service suppliers. After royalty payments and the current high cost of delivery - together with the need to keep prices competitive - Vod alone is not economically viable.

Video-on-demand, therefore, is only part of a range of what are being called interactive television services. (see nlso

"You have to offer interaction with banking, shopping, games and information services, too," saya Mr Andrew Creci, UK marketing director for Silicon Graphics, a leading manufacturer of video "server" computers. Trials all combine these services with Vod.

The Cambridge Interactive TV trial in the UK is an example. It has brought together a group of specialist companies to create the infrastructure.

ICL, the computer company, and Cambridga Cable, a local cable TV company, Acorn Computers and others are supplying the infrastructure components. As with other trials, the infrastructure to deliver services is complex and expen-

Powerful video server computers are connected through a fibre optic cable network and advanced communications computers to the "set top" computers in the bomes.

The trial is supported by a group of services suppliers such as the BBC; Anglia, the local commercial TV company: NatWest Bank and the Tesco

ing the technology and learning the lessons: BT's video-on-demand lpswich, using Sequent SE70 highway controllers

them they cover the complete range of interactive TV ser-

Lessons are being learned from this and the other trials. Mr John Burton, telecommunications marketing manager at Sequent, the specialist US computer manufacturer. . refers to advances in the infrastructure for delivering services, for example - "the vast majority of leading telecommunications companies throughout Europe and the rest of the world are

supermarket chain. Between engrossed in trials at the moment. We are involved in the administration systems of three of the major ones and are learning how to make a commercial service out of these technologies," says Mr Burton.

Sequent supplies what it calls "highway controllers" for interactive TV services. These systems handle the control and management of the service and work independently of the "video pump" - the computer which stores and delivers the moving pictures. Mr Burton

says that this is proving to be a workable model for delivering high quality services.

There are still some problems with the delivery technology hut these are minor issues and it is moving forward quickly. The problems come when you scale up from the trial to a full-blown service.

By separating the video pump from the interactive services we are able to scale the systems up to hundreds of thousands of users." he says.

### Partnerships |

Sequent is involved in three trials in partnership with the US software giant Oracle. In the UK, it is working with BT: in Germany with Deutsche Telecom; and in Italy, with

Telecom Italia. Mr Creci of Silicon Graphics also mentions the problems of scaling up trial systems:

"We are working on a trial with NTT in Japan with 400 people. But the plan is to connect tens of thousands and for large-scale deployment you have to take a different approach." he says.

Silicon Graphics chief executive Mr Ed McCracken recently criticised many trials for not paying attention to useability

A project by Video Graphics, one of the leading manufacturers of video 'server' computers. Trials indicate that

the technology problems are complex, they can be solved

with Time Warner in the US, Silicon Graphics has learned that although the technology problems are complex, they can be solved. But it will be

expensive: "The work we are doing with Time Warner un Orlando is ten times too expensive, but we know we can make ten times

the price in three years. "Those companies that have not taken that kind of technol-

and scaleability. From its implement systems today that involvement with NTT and are reasonably cost-effective are irrelevant. They are missing the point," commeuts Mr McCracken.

Silicon Graphics says it has also learned another valuable lesson from the trials. The quality of the service must at least equal that of present TV and video distribution channels:

\*Our view is that content is king. You must be able to deliver the best quality service. ogy step and are trying to which means you need the

bandwidth and expensive

"This is why it is expensive. But in four or five years' time, prices will come down and suppliers will have to rely on pushing high-quality services." notes Mr Creci.

The first lessons about Vod services are being digested by the various trial sponsors and progress towards a world of interactive TV is under way. It is still too soon to say, however, how the market will

Development of interactive services

# New signs of confidence

The digitisation of data is paving the way for a wide range of 'two-way' multimedia services, including interactive television, video-on-demand, home shopping and multimedia kiosks, writes Paul Taylor

lthough the early Texas and Bell Atlantic has take-up of interactive A services in the US and elsewhere has failed to match some of the early over-optimistic predictions made at the start of the 1990s, most analysts agree that interactive video technology. The commedia will eventually be a big pany claims the response to and dynamic consumer mar- the service has been

The evolution of interactive media in the home is likely to take place slowly - over the next 10 to 15 years and beyond, but the impact on our lives is expected to be dramatic," note the authors of a report on interactive mass media, prepared recently by the London Business School.

Among the other conclusions, the LBS study suggests: ■ Information and entertainment, especially video games, are seen as the drivers of adoption for interactive media. Marketing communications (advertising) and transactions (home shopping and banking) will follow, and may eventually become the main commercial use of interactive mass media.

technology at work accelerates the adoption of new technology in the home. ■ Early use of interactive media in tha home will mainly he through the PC, rather than

The use of interactive

television. A switched broadhand cable 'information superbighway' into individual homes may well not be cost-justified. except in the very long term as older wiring needs to be

replaced.

T uch of the interest in interactive services has focused on interactive television and video-ondemand, one of tha services which interactive TV can deliver. Last year, Ovum, the UK-hased technology consultancy, estimated that at least 50 trials had been completed or

were under way. Two main technologies are heing employed in the trials with the choice largely reflecting the existing infrastructure and the background of the network operator. Where the network is largely fibre-optic cable or a mixture of fibre and coaxial cable, ATM (asynchronous transmission mode) has emerged as the favoured option. However, ADSL has proved to be a viable alternative, particularly for the local telephone companies where the infrastructure is mainly copper wire. In some cases ATM and ADSL have both been used.

In Europe, trials have included Online Media's ongoing Cambridge Interactive TV trial which is delivering a wide range of interactive services including video-on-demand, home banking, home shopping, local information, games, educational material and news.

In the US, a number of interactive TV services have moved from the trail stage into commercial deployment. Among these Time Warner has launched a service in Orlando, Florida, Southwestern Bell is deploying a large network in

launched a 384-channel service in Dover Township, New Jersey. The Bell Atlantic service, like several of the trials, uses BroadBand Technologies ATMhased FLX switched-digital "extremely positive." Mr Salim Bhatia, BroadBand's chief executive, says: "We know that people want these services, and now we know, that they are

willing to pay for them." But despite this upbeat outlook, some studies hava suggested that consumers are unwilling to pay the subscriptions necessary to justify the hefty investment required to build an interactive network. In particular, some trial have suggested that consumers are only willing to pay a small premium over video-rental costs for video-on-demand. .

Some analysts suggest that "near video-on-demand" where films and other: programmes are shown continuously on a large number of channels throughout the day so the consumer has to wait only a short time, perhaps 10 minntes, until their chosen programme starts - may provide a more viable lower-cost

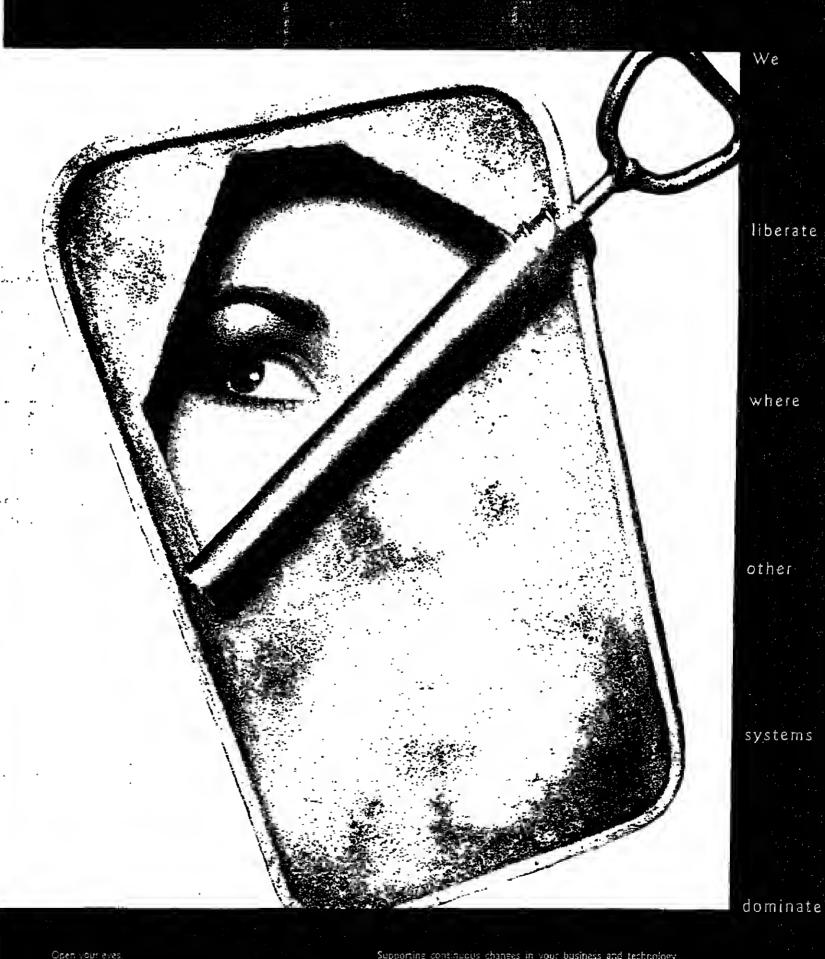
However, observers such as Kris Nasta who is in charge of BroadBand's European Operations, argue that consumers have yet to see the full range and quality of services which will be available over ATM-based services. Neither is he worried by the prospect of new competition for interactive services from other delivery systems, including digital

satellite the Internet. Recently, a number of companies have announced plans to provide World Wide Weh accessed television over the Internet, offering the prospect of widely-available cut-priced programming. Indeed, the recent rapid growth of online services and the World Wide Web, in particular, has encouraged many of interactive TV's early proponents to shift their focus to the growth of online

services and the Internet. Among the Internet "virtual shopping" arcades, established over the past year, is Barclays-Square, launched by Barclays Bank and Jersey-based Supernet whose early 'tenants' include Sainshurys, ToysRus and Argos. Similar secure electronic shopping malls include the Internet Shopping Mall and CUC International

Meanwhile, a growing num-

ber of merchants on both sides of the Atlantic, ranging from retailers to financial services firms, stockbrokera and employment agencies have set up their own interactive Web pages. Many sites began as experimental or pilot schemes. but this is changing fast as confidence grows in the security of the Internet for business, and a second generation of Weh sites provide real opportunitias for electronic commerce, interactive shopping and information services.



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### Multimedia in banking

# Positive feedback from trial

A growing number of banks is beginning to explore the possible benefits

If a visit to the bank manager still seems more akin to a meeting with the devil than a supplier-client partner-ship, take a new look at the face of banking - for today's likely to find themselves talking to a multimedia touchkiosk or a video screen as a real live person.

National Westminster was the first of the big clearers to take advantage of the retail opportunities being presented by new technology when it launched a videoconferencing customer interface in July

"We recognised we had a problem ini providing adequate service at acceptable cost," explains Martin Reynell, project director of the Network Strategy and Development Venture Branch. "Customers

face-to-face contact with people who could deal with their enquiries, but the bank wanted to keep costs down by not providing experts on every area the bank deals with in every

A six-month trial project, Remote Access to Expertise. went live in 10 branches in the Birmingham-Bedford-Milton Keynes area to enable customers to use the videoconferencing system to obtain information on the NatWest Home Protector package of huilding and home contents insurance.

Once shown how to use the system, customers called up NatWest Insurance Services in Bristol to connect to one of eight trained experts. A corner of the computer screen pictured the NatWest employee,



discontinued, but NatWest is

considering installing multime-

dla touch kiosks linked to

videoconferencing in some

Rather than speaking to an

expert throughout a "meeting",

customers could obtain a vari-

ety of information, including a

quotation, say, on home insur-

screens: the videoconferencing

could be used to call up an

expert to answer any questions

the system could not answer.

This is an approach also being taken by Barclays.

Kiosks offering product infor-

mation were opened in eight hranches from Newcastle to

Brighton early last year. "Feed-

back from staff and customers

has been good," comments Anwer Shah, head of Barclays

"Customers are increasingly

accepting the use of this tech-

nology, helped by the growth

of multimedia PCs in the

Further projects include the

provision of aix klosks for

Camden Motors, a Barclays

subsidiary, offering details

and used cars and ancillary

including pictures - of new

Multimedia.

with the rest of the screen displaying information on insurance, such as cover and premium. Details keyed in in Bristol - type of insurance, sum insured, etc - were supplied by the customer using the videoconferencing system.

Any questions or problems could be dealt with immediately, rather than through referral to a third person. Once the customer finished talking to the expert, a quotation, application form and other documents could be printed ont at the customer's branch.

Positive feedback led Nat-West to launch further videoconferencing projects. A for-eign advice link was opened etween a Southampton branch and an International banking centre in the town in February 1995, providing information on such subjects as paying money ahroad and documentary credits. The Wirral went live last May with a gen-

eral customer advice service. A tax advice service linking branches in Worthing and Canterbury to a Brighton tax office helped customers, especially senior citizens, to complete last year's tax returns.

The Home Protector and for-

■ Home banking - By Alison Smith

services, such as insurance and

Three sites in Slough and

three in Nottingham are split between Camden dealerships and shopping malls. On January 8, Barclaya

launched "Barclayzone" in three branches - Fenchurch Street, Crawlay and Maidstone to offer details on investment and savings products, Customers use touch kiosks to obtain information, including a realtime ahare price or a stock opinion.

Customers who wish to transact a deal can then make a live video link to Barclays Stockbrokers in Glasgow to complete the transaction: those who do not have an account can open one over the video link. A number of new accounts were opened in the first 10 days of the system'a

Other banks are beginning to explore multimedia technology, too. Last October, Lloyds. for example, launched two LloydsPoint kiosks at the University of Sussex and Derby University to provide students with information on products and a telephone banking service for use when a branch is not available.

Tha Sussex LloydsPoint is located next to a cash point and is open 24 hours; the Derby kiosk is sited inside the Student Union, which is open from 6am to midnight. Each has a video link open from 8am - 10pm to connect to Lloyds' telephone banking ser-

Students are using the klosk to obtain information about student packages, plastic cards, travel services and other roducts. They use the video link to check balances, transfer money between accounts, and find out wby the cash machine will not give them any money. Some things, at least, never

Broadcasting and cable - By Raymond Snoddy

# Saturation point looms

Special information channels or printed television programme guides will help alleviate the dangers of something akin to entertainment overload

The increasing abundance of new media and information provided by the emerging digital technoloproblems, according to a research report by SRI International, the former Stanford

In its latest study of the new media world, SRI warns that television is going tha way of business computing, which has already seen a shift from the days when data was a precious resource to the current "information overload".

In future, viewers faced with hundreds of television channels are going to need reliable them make sense of the vast number of options. Special informstion channels or printed television guides will help alleviate the dangers of something akin to entertainmant overload. But SRI believes two kinds of participants will be specially favoured in the new world those who can develop and extend strong existing brands already known to viewers and those who are first to enter new niche sections of the mar-

"New-media visionaries often proclaim that old-media entities will quickly become dinosaurs. The reality is that existing brands will be key vehicles for new-media success," SRI

believes. Existing broadcasters can use their established name to launch new channels. In the US, the sports channel ESPN has launched ESPN 2: while, in the UK, one of the most famous names in British commercial television announced in December it would launch a raft of new channels devoted to particular topics each devoted to subjects such as motoring, health or cooking.

SRI also argues that being first in a new niche is absolutely vital even if that market is not popular at the mement. in the US, the Golf Channel, a cable television channel, is unlikely to attract imitators.

The small, enthusiastic audience would simply fragment. In the UK, Granada, in moving into what is the television equivalent of the glossy magazine for the first time, is putting down a marker for the future. Once Granada's television motoring channel is estab-

lished, it will be very difficult for anyone else to challenge. Such strategic competitive considerations are coming to the fore as leading internstional corporations plan first tha 150-channel world and later, probably before the end of the decade, even 500-channel

Already, billions of pounds are being invested on digital satellite projects - not just in the US or Europe but in Africa. America, in the Middle East and in Asia.

In tha UK, British Sky Broadcasting, the satellite com-pany controlled by Mr Rupert Murdoch, is now capitalised at more than £8.7bn. Yet although detailed planning has been carried out the decision to launch a 120-channel system has not vat been taken and could be deleved into 1998 because subscriber numbers are still growincluding cable-linked bomes in the Irish Republic.

ven in the UK, new channels are being cre-ated all the time. Last autumn, BSkyB added no less than seven new programme services including the Playboy Channel, tha Sci-Fi Channel and the Disney Channel.

Mr Sam Chisholm, the BSkyB chief executive, believes that the best way to keep the number of subscribers rising is to continue to add new programme services.

Cable is making its own contribution to programme diversity by seeking out its own exclusive offering to try to differentiate itself from satellite. Channel One, owned by Associadditional 20 channels or so ated Newspapers, is offering 24broadcast from existing landhours-a-day local television based transmitters to convennews in London and recently tional set-top aerials, although



spread to cable networks in

The Mirror Group is offering Live TV, a round-the-clock entertainment channel carried on cable networks in London and Birmingham which will also expand to Scotland. Its ontput has been galvanised by Mr Kelvin Mackenzia, the former editor of The Sun, who has introduced Topless Darts, the Canary Wharf soap opera with the guarantee that "You're never more than five minutes away from a snog" and a "News Bunny" which adds a little extra something to news

The process never ends which means that SRI's con-cern about a scarcity of context and an mability of viewers in cope with the diversity may not be very far off in Europe. This year, two new, competing, 24-hours-a-day television weather channels will be launched, and there are plans for a new channel televising the European Parliament plus lots of channels created out of the libraries of the existing

broadcasters. For good measure, tha UK and Sweden bava both announced plans to launch digltal terrestrial television - an

a digital decoder box will be

At the moment BT is also conducting commercial trials on the possibility of providing digital information and entertainment-on-demand down existing telephones.

For some, creating two-way interactive communication systems is the main goal. Telephonea clearly do that although capacity is at present limited. Cable, particularly fibre optic cabla, provides vir-tually unlimited carrying capacity although cost is still a

The three largest cable com

panies in the UK - TeleWest Nynex and Bell Cableme dia - have set up a research programme to design interac-tive services including providing easy access to the Internet. Some - and they are usually satellite providers and operators - argue that land based super-electronic highways are

expensive and inflexible. Satellite can provide the most cost-effective delivery of data and pictures and two-way communication is possible, too, via simple modems in the black box decoders connected to the telephone network. All of which suggests that

the new age of information and entertainment is likely to be supplied by a diversity of high-

## Consumer interest is rising sion) was asked the previous year, just one-fifth of those would broaden the market fur-

Almost one in four people think they will be using home banking within two to five years

either bankers nor technology experts doubt that within a few years the systems will be in place to allow just about all personal customers to run their current accounts and buy complex financial products from the comfort of their own

sitting rooms. What is more open to questioo is bow swiftly that potential will be realised.

A survey carried out last autumn by Mori for ICL Financial Services suggests that readiness to consider using bome banking is rising

sharply. In all, 45 per cent of British adults would use a home banking service available through a television or PC: when a similar question (referring only to services through the televi-

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questioned were interested. Almost one in four people

think they will be using bome banking within two to five years. Paying bills, checking balances, ordering cheque books and money transfers are likely to be common transactions, while there is less enthusiasm for using it for transactions such as opening a current account, arranging loans and buying mortgages.

Mr Anwar Shah, bead of multimedla at Barclays, believes that in just a few years customers will want to buy for themselves through the television some "commodity-type" services such as ordering foreign currency and buy-

"We've seeo a sea-change in our customers' attitudes to technology over the last 18-24 months.

There are now a lot of people with multimedia PCs at home, and some companies are now looking at getting internet

Mr John Sturgeon, business development manager for cus-tomer hanking at ICL, says that the UK is more advanced in using technology for home banking than is continental Europe, although it is a couple of years behind North Amer-

While the proportion of US customers banking by PC is still in fractions of 1 per cent, the American Banking Association expects online banking to be offered by more than 40 per cent of banks with assets of pared to the 11 per cent who were offering it last year. in the US, one of the most

popular forms of computer banking is through the ing bome or motor insurance. Quicken Financial Network, which was launched last autumn by intuit, the leading maker of personal finance soft-

The company plans to launch full banking over the internet during the second half of this year, giving banks which sign up the choice of access by television, which how to brand, to price and to

market the service. Although such initiatives are likely to accelerate the pace of change, it is too soon to suggest that the growth of home banking means saying farewell to the branch networks of the high street banks in the US or

Mr Steven de Looze, a senior executive in delivery channels at National Westminster Bank, Britain's biggest bank, believes the shift away from branch banking will continue, but adds: "We are not talking about the complete demise of

branch network. "We are social creatures, and there is no way will we do all our banking and working over the television. We will still need face-to-face contact for some products and services."

insta-Appure is not available to manuface

convinced that substantial investment in developing a complete range of online banking services is worthwhile. Mr Gordon Pell, general manager of retail operations at the Lloyds TSB Group, says: "All our planning assumes that there will be no charges on the mass market current account for the foreseeable future. because no one dare to do it.

"If that is the case, there is no great advantage, because the service is not cheap and there are only a small number of people whose financial lives are complicated enough to

Agreement about the role of technology in selling more complicated financial products to the mass market at home is more widespread. It is seen as an aid to the interview with a sales agent in the customer's home, instead of a replacement

"Customers welcome the opportunity to do 'what if' calmortgages in the absence of a sales person," says Mr Shah. Many of the UK's large life

assurance groups have already found that giving computers to their sales agents assists them in the sales process by enabling them to produce in the customer's home, during the sales process, quick and accurate details of what particular policies would produce for different individuals.

For the UK's retail financial services sector, hit by low levels of customer confidence in the quality of advice being given, tha use of computers by sales agents in millions of cus tomers' homes has an added advantage - although not ona that the organisations are so keen to shout about. It can be a further check in ansuring that sales agents give advice in accordance with regulators' requirements. As one banker said: "It's a way of making the sales force compliant.



# What IT developments are taking place in your industry?



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### • THE IMPACT OF TECHNOLOGY IN THE TRAVEL INDUSTRY **Developments and trends**

by Irene Viltos Rowe

The travel industry is one of the world's largest consumers of telecommunications services. The Impact of technology in the travel industry, Developments and trends, summarises the key technological developments as they apply to each sector of the international travel industry — hotels, travel agents, airlines, car rental organisations, and travel service providers and the business traveller.

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# An under-pinning for business

US company 3Com believes it can transfer some of the benefits of using networks to the small office and even the home

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herever users need to gain access to infor-mation and to contact colleagues in order to get their work done - whether they work in offices or at home network-centric computing has come to the fore.

At its extreme, network-centric computing is leading to the development of cheap computing devices that are designed to connect to the Internet and have no local data storage. The idea of a standalone

computer is also beginning to disappear in the small office and home environment. This is a trend that networking company 3Com, among others, recognises and is addressing with the recent launch of its low cost Office Connect hub product.

The original purpose of networks was to share office printers and occasionally transfer files between workers, but they are now a key element in the way businesses conduct their operations. Networks have become the foundation for client-server computing; for desk-

top videoconferencing, for pull-ing together the efforts of groups of workers scattered around the globe through products such as Lotus Notes; and they offer the means for collecting and distributing knowledge within an organisation.

As staff find themselves working from home and from remote locations, they want the same network access they are used to in the office.

"A lot more people are working from home, whether it is telecommuting or simply putting in an extra few hours when they get home. And they want quick access to the company network. The trouble is that 28.8 modems are too slow, they take too long to connect," says Ken Baynton, managing director of BtN Ltd, a company specialising in linking net-

ISDN lines offer a better solution. "With ISDN, it takes just a second or two to make the connection and it is much faster than modems," says Mr Baynton. He points out that although ISDN provides quick network access, there is a perception that it is still too expensive - even though users typically pay only for the time accessing the network, unlike with modems where the telephone line is open for as long as the user is logged on.

The US company 3Com believes it can transfer some of the benefits of using networks



The PC turns into the PCTV - see also report on page 15

to the small office and even the home: "It has always been expensive to network a small office. Some companies have found that if they have a small office, it is cheaper to connect users to the central office rather than install a local area network. We have developed a new bub product that makes it much easier and cheaper to connect small groups of people," says Boh Cushing, European marketing director at 3Com.

3Com's Office Connect product handles the wiring connections between PC users and office peripherals such as faxes and printers, and outside com-

that there is a large market in networking small offices, and as homes add more PCs, there is a vast potential market in networking home computers.

However, unlike the larger and complicated corporate networks, the key to networking the small office and home is to keep things as simple as possi-

"The Idea we are working towards is that the network gives people access to what they want, whether it is the Internet or the company network. We are in the business of providing the plumbing, making sure that when the computer user turns the tap, they get what they want," Mr Cushing adds. "It is important that the network access be as transparent as possible."

Tith Office Connect, aCom carefully hid the complexity of the system, allowing customers to aimply plug it into a wall socket and have an "instant" network. Other companies. such as Compaq Computer and Novell, are also targeting the small office and home market. Compaq is planning a series of low-priced networking prod-

munications. The device has ucts that can link home PCs been designed to be simple to and other home-based systems use and install. 3Com believes such as lighting, heating and security systems.

Novell with its Nest technology, aims to extend its Netware networking system to controlling home-based electronics systems and even the electronic systems within cars. Nest relies on embedding special chips into a wide range of electronic devices and controlling their operation through

standard power lines. At IBM, the idea of networking has been built into everything the computer giant does. "We have a networking divisioo, but every division of IBM considers networking, and the demands of networking, into their product plans," says Kevin Bishop, European and Middle East marketing man-ager at IBM Networking Prod-

Mr Bishop points out that different types of networks are good for different tasks. For example, the Internet offers giobal access to a wide variety of information and communications but it is not suitable for networking applications that demand a fast response. IBM is trying to make sure that different types of networks can still communicate with each other.

■ Cable data communications - By Geoffrey Wheelwright

# Faster access to online services

New facility offers 'multimedia the way it's meant to be - immediate, easy and fun'

The merging of telecom munications and cable television interests is spawning not only increased competition in many businesses, but also belping to create new enterprises and ser-

One of these is the provisioo of telephony-style services using the cable television infrastructure, commonly dubbed "cable telephony". Not only are cable TV companies flocking to the business of providing traditional voice communications using their infrastructure, but many are making a big push for access to the worldwide Internet computer network (and its popular World Wide Web service), using high-speed cable TV lines.

In Canada, for example, the domestic cable television giant Rogers Cablesystems is testing

Wave for Home. The service. announced in Newmarket, Ontario, last November, claims to offer "the fastest, most powerful access to a suite of online content, including the Inter-

For C\$39.95 a month, consumers in this trial area use their PC and a cable connection to gain very high-speed access to the Internet and the World Wide Web.

"We've integrated break-through technology with Rogers' newly-upgraded two-way, fibre-coaxial broadband cable network to develop Rogers Wave," explains Colin D. Watson, president of Rogers Cablesystems.

"The service works at breakneck speed. A video clip that would normally take many minutes to download with a common telephone modem, takes only seconds with Rogers Wave," he says. "Now people can enjoy multimedia the way it's meant to be - immediate. easy and fun."

The service uses a 500,000 bits per second "cable modem",

a specially-designed modem engineered for use with cable television networks, which is almost 20 times faster than the standard 28,800 bits per second telephone modem. Rogers also points out that with a cable modem, there is no "busy" signal, no dial-up - and no worry about tying-up the phone line when you are surfing in cyber-

The speed advantages are not universal, however. The performance of Rogers cable moderns is dependent on how information providers configure their World Wide Web sites. For this reason, the company has a program to encour-age them to take advantage of the technology.

"Through its Rogers Wave Greenhouse Program, the company is encouraging the develcoment of new content that takes advantage of the large bandwidth Rogers Wave offers," says Watson. "For instance, Lifeline, Toronto Life magazine's online publication. as well as many other organi

Continued on next page

## Digital breadcasting

# The key challenge is price

The cost of digital television sets will come down in are developed

igital broadcasting is beginning to make a big impact on the production and distribution of television programmes but its journey into the home willtake several years, following the development of cheaper digital TVs and digital TV decoding boxes.

Digital broadcasting technology involves the production and distribution of video images in a digital rather than analog form. The advantage of the digital format is that the quality of the original work is preserved throughout the production and distribution process. With normal analog video, there is a certain amount of picture degradation that occurs at every step of the

distribution chain. In the US, digital TV broadcasts are available through services such as DirectTV's digital satellite transmission But the future of digital broadcasts is closely linked to the future of interactive TV and high definition TV (HDTV).

The US Federal Communica tiona Commission has approved a digital HDTV standard proposed by an alliance of leading electronics compas but there are still some Vetails to be determined such as how to handle the transition from analog to digital TVs. With more than 300m nalogue TV sets in use in the US, the FCC wants broadcasters to offer both analog and digital transmissions while the transition to full digital broadcasts takes place.

Comparisons

Although the technology for receiving digital broadcasts is available, the key challenge is

"The biggest issue is not one of distribution or government regulations, it's at the end user - providing the means to view digital broadcasts," says Reza Jafari, vice president of the entertainment and broadcasting division of Electronic Data Systems (EDS). "I can produce and distribute content digitally, but there is virtually no audience. The cost of digital TV reception has to come down in price."

Consumers would have to pay as much as \$6,000 for a digital TV or \$500 for a digital radio. These costs are far too high compared with analogue TVs that can cost as little as \$200. "These are tough economics to beat," points out Mr

The cost of digital TVs will come down in price as new chips are developed and as the manufacturing economies of scale begin to take effect. But there is an additional problem

in offering digital TV services

Clearer pictures are not enough to persuade consumers to pay more for digital TV price as new chips broadcasts. The goal is to be able to offer consumers a wide range of services. These could include custom TV programming, interactive TV, and ed choices of TV channels and programmes

There have been several US pilot projects testing various interactive TV services, conducted by leading TV cable and communications companies, but the tests have so far proved disappointing. Cousumers taking part to the trials gave a mixed reception to the services offered and many said that they would not pay much more than they currently spent on cable TV and video rentals:

"The problem with many of these trials is that they were too small, so that even if they were successful, it would be difficult to extrapolate those results to the general population," says Mr Jafari. "The trouble is that no one really knows what types of digital

There is also uncertainty over what the best transmission medium will be to deliver digital broadcasts. Fibre optic lines to homes would be the best solution but the cost of laying the lines is very high. Existing coaxial cable-based cable TV lines offer a cheape technical challenges. Wireless broadcasting is a cheaper solntion but, again, the challenge will be to customise services

The huge rise in the use of the Internet brings a further option. Although the bandwidth of the Internet is very small, over the next 10 years it will grow to accommodate large files, such as digital TV broadcasts, turning it into a viable distribution channel for digital broadcasts.

While the industry tries to solve the problem of digital broadcast reception, the use of digital production and distribution promises to cut costs and improve the production process. EDS is among several companies that offer hardware and software products for the production and management of digital video content which is then converted to analogue form for broadcast.

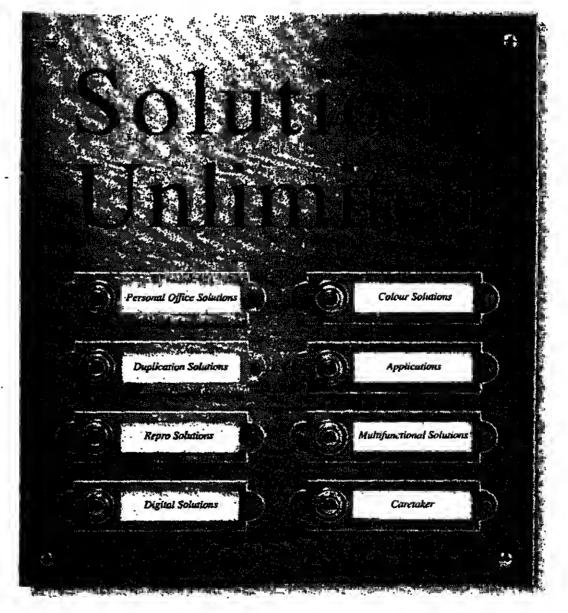
"It is often very difficult to find video clips and it can often be quicker to send out a TV crew to re-interview a person rather than search a library for the right clip. With digital content, it is much easier and quicker to find the right clip," says Mr Jafari. Producers can also resell

parts of their content to other producers, which will help

bring down the overall costs of

producing digital video con-Tom Foremski

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# Challenge of the new systems

The worldwide publishing industry is now at the centre of a digital revolution, writes Paul Taylor

nisors in electronic publishing - such as CD-Roms, online services and the laternet - represent both a challenge and an opportunity for traditional publish-

Today, many encyclopedias are available in CD-Rom format or online, academic are often published on the futernet before they find their way into print and at last count at least 500 newspapers around the globe had established an Internet or online presence.

With about 50m CD-Rom drives installed worldwide by the end of hist year - a figure projected to rise to more than 400m by the end of the decade - CD Rom publishing is now a well established and profitable business model for helb traditional publishers and database vendors.

CD-Rom publishers include print publishers of reference materials who have diverslfied such as Reed which already publishes back copies of New Scientist on CD-Rom and other publishers such as Spain's El Periodico newspaper group which produce CD-Roms containing news and information for local school use. Others which have embraced the CD-Rom publlsbing market enthuslastically include consumer puhlishers such as Dorling kindersley.

For example, in the wake of Microsofi's success with its Interactive Encarta multimedia encyclopedia, most contemporary relerence works - and many older publications including the complete works of William Shakespeare - are now available in CD-Rom format, fully exploiting the large 600Mh capacity of the medium. Other advantages include

the powerful cross-referencing and search tools that can be used and the ability to incorporate music, sound and video along with text and

One of the problems of publishing contemporary reference works on CD-Rom is that, like their bard-bound counterparls, they date quickly. One possible soluthan is to build a "multiple media" product which links standalone software with the Internet or an online service enabling the Importation of

up-to-date information. Dorling Kindersley Is among those publishers experimenting with this approach and is currently werking on ways of integraland Internet functionality into its CD-Rom's content and across to online "clubs" or bullerin boards, "Wo believe that 'hybrid media' and 'modia packages' or 'multiple media' have a bright tettate | says Andrea Kirkby of baswa's Institute of

Busesirch. Meanwhile, newspaper publishers are also beginning to face up to the implications of the new dental media world. Changing social habits and emerging new technologies mean that newspaper readership has been in decline for a

Tew delivery mecha- tion is declining by between one and two per cent a year in Britain. Younger readers in particular seem to he turn-ing to new media for their information and entertainment. As a result, the newspaper industry has been investing heavily in media such as television and multimedia such as CD-Roms and Internet publishing. A year ago, ahout 60 US newspapers had some form of electronic edition but Steve Outing, new media consultant and author of the Online Newspaper Report for Jupiter Communications, estimates that there could he as many as 2,000 newspaper products online

within the next 18 months. Electronic publishing uptions for newspapers (see report, right, by Stephen McGookin), include the Internet, using a World Wide Weh sile, or a partnership with one of the large online ser

vice providers. Knight-Ridder's San Jose Mercury News was among the pioneers in electronic newspapers with its Mercury tent was designed to comple ment rather than substitute for its paper-based edition - hedging against the risk of cannibalising their paper readership.

But despite the Mercury Center's success, a single hlueprint for electronic newspaper publishing seems unlikely. Many other newspapers and magazines have chosen to publish the contents of their existing paper edition either partially or in its

Similarly, there is a lively debate over whether electronic newspapers should attempt to mimic the broadcast quality and "browsibility" of their paper-based counterparts, or deliver a more targeted or personalised version of the news. The second approach has been champloned by Nicholas Negroponte, director of the Media Lah at the Massachusetts Institute of Technology, who supports the concept of the 'Daily Me' where the reader pre-select Individual areas of interest to make up the content of their own personalised electronic "newspaper".

Meanwhile other publishers have been experimenting with different delivery systems although Knight-Ridder's so-called Tablet - or portable flat panel display concept - was abandoned last year. However, it is still early ers, most of whum have yet to work out what conteot their audiences want to consume electronically, what form of advertising content is appropriate to the new medium and how much consumers will be willing to pay.

What most analysis do agree upon, however, is that the new media is likely to complement rather than replace print, even though electronic publishing looks set to increase its share of the market over time. "Digitisation of content will not only allow enhanced interactivity. but will allow content to be shared between media," says - the total newspaper circula- Daiwa's Kirkhy.

■ Electronic newspapers - By Stephen McGookin

# Publishers explore fresh online opportunities

About 800 newspapers are available online and more are being developed

Then San Francisco's two leading daily papers, the Examiner and the Chronicle were shut down by strike action in 1994, their electronic offspring rap-

idly appeared on the Internet. The following year, when the Detroit Free Press was off the streets, an online version of the paper was already available through a commercial ser-

The incredible growth in the number of home-based personal computers over the past decade and the increasing sophistication of online services and the Net has led to newspaper companies exploring more seriously - and not just as a defensive stratethe idea of electronic publishing.
The result is that there are

now about 800 newspapers available online, with more in various stages of development. Steve Outing, new media consultant and author of the Online Newspaper Report for Jupiter Communications, has guessed that there could be as many as 2,000 newspaper prod-

ucts online within the next 18

months.

One point that Outing emphasises is that the landscape in this sector changes extremely rapidly, something that is apparent from the frequent additions to both Outing's site through Editor & Publisher magazine (www.medioinfo.com/edpub) e-papers.home-page.html) and Eric Meyer's Newslink (www.newslink.org); which are collated listings and links to newspaper and magazine products around the world.

Over the past two decades. the Idea of newspapers delivering their information products to the reader electronically rather than on paper has been frequently explored in one form or another - whether that he through a conventional screen-based model or hy a more fanciful route such as Virtual Reality glasses.

Pioneering research at the Media Lab at the Massachussetts Institute of Technology, under Nicholas Negroponte, its director, bas helped push the dehate within the lodustry. eovisioning such developments as the "Daily Me": where the



reader specifies individual areas of interest that make up the content of his or her "newspaper". (See also the interview with Nicholas Negroponte on page two of this IT Review)

The so-called Tablet - or portable flat panel - concept developed by Knighl-Ridder's Roger Fidler was an attempt to marry reader-driven choice in content with greater reader freedom through a portable delivery system. It was abandoned last year

hy Knight-Ridder although Fidler continues to develop the Tablet in his research at the University of Colorado.

## Database products

Commercial database products such as Lexis-Nexis. Dialog or the FT's own Profile service, provide searchable full-text versions of newspapers, hut again, these are intended for the non-home user in a husiness environment, as their premium pricing attests. Web-based novelties such as

Dave Maher and Jeff Boulter's Crayon - Create Your Own Newspaper (http://crayon.net) - allows the user to choose from a menu of categorised sources, then to compile the material into a menu of

Newspapers which decided to put themselves online basically had two options: they could publish oo the internet, or they could enter into a partnership arrangement with one

Rapidly becoming standard

■ CD-Rom systems – By Geoffrey Wheelwright.

It is already very hard to find any new

his year is likely to be also predicts that the percent-

desktop computer that does not

remembered as the one

users to archive their data.

According to statistics from

London-based First Informa-

tion Group, a leading UK mul-

timedia company that pro-

prepares CD-hased training

materials for corporate clients.

there were more than 49m

CD-Rom drives installed world-

wide by the end of last year

- with that number predicted

to rise to more than 400m by

The company is investing

\$t.9n1 over three years to pro-

vide Wave for School to 600

schoots in Ottawa, Etobicoke,

Mississauga, Brampton, Lon-

don, and Woodstock, Ontario.

free of charge for the first two

The service will be available

Finally, there is a Wave for

Work service, offering a link

between corporate offices and

staff working at home. For the

technical trial, Rogers is work-

ing with IBM Canada, a com-

pany already operating an

extensive telework programme,

called Flexi-place, with 1,100

employees across Canada.

working away from the office.

Wave for Work provided

employee access to a suite of

information services and IBM

computer applications avail-

able through IBM's Global Net-

work, including services previ-

ously macressible from home.

such as application-sharing

and interactive multimedia

Through a cable modem,

duces CD-Rom titles

include a built-in CD-Rom facility

of the large commercial online services such as America Online, Prodigy, or Compu-Serve. They could, of course. do both, and many did. Taking advantage of its high-

tech reader profile, Knight-Rid-der's San Jose Mercury News was among the pioneers in electronic newspapers. Its Mer-cury Center web site (tourn, simercury, cont) was an example of how to produce lively, interesting content designed to attract the crucial regular readers who would provide the high number of "hits' advertisers were looking for. Not surprisingly, it soon moved from a free service to a subscription base.

The new medium also allowed publishers of hardcopy titles to extend their branding hy producing parallel products which take on a life of their own - and not simply shovelware" editions contain ing the same, or less, content

than the paper product.

One of the best such exampies is HotWired (www.honoired.com), the Net version of Wired magazine. More recently, The Guardian newspaper in the UK thttp:// go2.guardian.co.uk) has developed a magazine-style weh format which complements, rather than replaces, the hard copy product.

The most successful online newspaper in the UK has been tha Electronic Telegraph (www.telegraph.co.uk) which since its launch in November 1994 has huilt a considerable virtual readership, including a good many British expatriates.
ft recently introduced an online version of the popular Fantasy Foothall game - an example uf how added value content can expand the paper's audience away from that traditionally associated with the

paper product. Contestants pay a £10 (\$15) fee to take part, having first registered with the Electronic Telegraph access system and provided useful demographic information for the database marketing folks. According to Pippa Littler of the Telegraph. the paper has heen "overwhelmed" by the response to the new online game.

Like all publishing ventures the more you know your audience, the greater your chance

It seems likely, therefore, that newspaper publishers across the globe will spend the best part of the next year try-ing to find out whether their audiences want to consume their product electronically; how much they are prepared to invest in doing so - not neces sarily in subscription fees but in time and participation - and whether advertisers can be persuaded to huild on their initial encouraging interest in the interactive medium.

 Stephen McGookin will report on the lotest developments in Electronic Newspapers in the 'A-Z of the Internet,' an FT-IT magazine due to be published next month.

■ CeBIT 96: trade fair preview

## 6,000 exhibitors head for Hanover

More than 6,000 exhibitors from 60 countries will be taking part in the largest-ever CeBIT show at Hanover, Germany - the annual office, information and telecommunications trade fair which takes place this year frum March 14 to 20, writes Michael Wiltshire.

More than 1,500 exhibitors a record - will take part in IT categories which will fill seven large halls.

In the network category, there will be 450 exhibitors, many of them highlighted in special displays such as News Net 96, ATM World and the Networking Centre.

More than 2.000 exhibitors

will be featured in the Software Centre. Other large areas will focus on banking and financial systems, com-

puter-integrated manufactur ing and design, consulting and services, security equipment and card technology. plus a wide range of business and office systems. The event, which will be

averging technological

open daily from 9am to 6pm, has also attracted a record number of UK exhibitors -323 compared with 266 at last year's event. "CeBIT is clearly the place to be this year if you are in the IT industry." says Mr Arnold Rustemeyer, general manager in the UK for the show organiser, Deutsche Messe. Last year's show attracted

more than 755,000 visitors of whom 100,000 were from outside Germany. For more details, telephone

Hanover (0)511 893 80 11/12; fax (0)511 893 80 03.

■ The electronic office

# Drowning in a sea of documents

'Too much executive time is spent at the photocopier

ost offices today "are awash in sea of docu-ments - both digital and paper," says Russell Peacock, general manager of Rank Xerox office document prod-

Ten years ago, the average by a worker was less than 30 fax/print/copy pages a day. By the end of this year, it will he 70 a day (including digital documents) predicts Xerox.

But Mr Peacock helieves so-called "knowledge workers" do not have adequate control over the three stages of document production: Document input - the cre-

ation, scanning or electronic capture of information. Document management the ability to store, retrieve,

summarise, share and manipulate content. ☐ Document ouput - local or distributed printing, copying, faxing and viewing.

In most offices, personal

computer-users depend on an eclectic mix of devices, some of scanners - are not even on the network. So they spend time 'walking' documents from slow laser printers to faster copiers. This creates bottlenecks in

key processes and low productivity. To put it another way too much executive time is spent at the photocopier. Xerox has a strategy for deal-

ing with this. It has just launched two Document Centres which can be connected to networks. These enable users to print, fax or copy documents from a PC. An added henefit is that

users can deal with paper and digital information in an integrated way. For example, paper pages can be scanned into a Document Centre and combined with digital data to produce multiple copies of a finished, stapled report.

The Document Centre System 20 - for networks of 20 users - costs £12,660. The System 35 for groups of up to 50 costs £27,280.

Rank Xerox helieves that the business of hringing office ser-vices to the desktop will he worth \$1bn by the year 2000.

### Integrated document management

The company is certainly not alone in believing that users want to he able to manage their documents in a more integrated way. Other suppliers are husy forming alliances, or taking over companies so that they can setl a wider range of products for the electronic office. US-hased image processing

supplier. FileNet, has agreed to acquire Saros. a US company specialising in document management and Internet webserver software. Last year it acquired Watermark, which sells desktop image processing and workflow software. It has also entered into an agreement with network company Novell which integrates FileNet's workflow solutions with Noveli's products.

Microsoft has an agreement with Wang, which enables it to give away Wang's ImageView image processing software with Its latest version of the Windows operating system, Windows 95. This enables

Microsoft to gain entry into the image processing market and Wang to gain even more experience of desktop computing. "This is image processing for"

everyday work, without need-33 lng a large, centralised sys-15-tem," says Roger Whitehead, '45 director of the Office Futures : %7 consultancy and editor of Workgroup Computing.

### Component software

Another trend in the electronic office is the move. towards component software. Lotus, the software company '11 owned by IBM, is the first large supplier to offer components ! (small parts) of its software applications via its Internet weh site. At present, these are only

available for users of Lotus -Notes 4.0, a groupware and conferencing application. But "other major suppliers, such as Novell and Microsoft will sooo follow," says Whitehead. Wang's ImageVlew software can also be downloaded from the Web.

Enjoy it while it lasts: software suppliers are likely to offer component software free as an experiment, then start

As this component software example shows, no office is an "island" - and being able to exchange documents and software with the outside world electronically is also important. This facility should become easier as more deals combining software and telecoms companies - are struck. For example, Microsoft and US telecoms company MCI have agreed to market each others' services: MC! will distribute and sell Microsoft Network, an online service.

## Just-in-time hotelling

But with growing use of mobiles, satellite networks, Internet e-mail and portable PCs, will anyone be working the office of the future?

Probably - a halfway house is "hot-desking", where users spend a lot of time out of the office hut are allocated desks as and when they need them. Andersen Consulting - no stranger to the practice of "hot-desking" - is using what it calls "just-in-time hotelling" in its Paris offices.

When employees arrive, they check in by swiping a smart card through an interactive station. They then know which room has been allocated to them and can be tracked down easily by reception staff. Once In their allocated room employees have access to Octel voice mail and Lotus Notes electronic mail.

consultants can book space in the office as if they were booking a hotel. There is even a first-class style lounge containing smaller workspaces, and

while waiting for a meeting, filling in a time-sheet - not everyone's idea of relayation -

shorter hours.

Joia Shillingford

## the year 2000. The company Fast access to online services

sations, will sooo be offering content to consumers through

Those who use the service need to have a minimum 486SX25 megaliertz processor with SMB of RAM and a Super VGA mounter. Subscribers are then equipped with a cable modem, rental of which is included in the price of the service. The service also includes a range of services Rogers

Wave has assembled. These include Wave Web links to explore the Web for enterminment and learning, a facility that Rogers calls "Tidal Wave" Weh links which give users access to specially-designed high-speed content such as Lifeline and the Life magasine's online publication - as well as electronic mail capabil-

If Rogers encounters no big stumbling blocks during this trial, the company will make the service available in a num-

her of additional Cauadian markets later this year with widespread access to the ser-

Through a consortium involving Rogers Cahlesystems, Shaw Communications of Calgary, and Groupe VidTotrop of Montreal, the cable service will be available nationally in Canada as Rogers' purtners Shaw and VidTotron roll out their versions.

Rogers is also making the

tent, including the internel. Industry Canada's Schoolnet. libraries and databases.

and other information facili-

Wave service available for schools in an initiative directed to students from kindergarten through to Grade 12. Wave for Schuols provides users with high-speed interactive access to a sulte of coo-

Future educational services will include online newspopers. magazines, museum databases,

Students will also be able to participate in online lessons.

based PCs will grow from a in which CD-Rom, the data storage format based on mere 2 per cent in 1994 to 32 per cent by the end of 1998. Compact Disc technology. became the standard for These figures confirm what distributing commercial softmost in the computer industry ware and started to take off as a way for corporate computer

age of UK homes with CD-Rom-

already know: CD-Rom hardware is the fast-hecoming standard on all desktop personal computers, and even many high-end portable notebook computers. in fact, it is already very hard to find any new desktop computer that does not include a huilt-in CD-Rom. Since software published on

CD-Rom is much cheaper for software manufacturers to produce - the huge capacity of a CD-Rom means that manufacturers do not have to put dozens of floppy disks in each box ou which to hold the software. and they can publish an electronic version of the manual instead of printing a large. bulky and expensive paper version - it is also becoming the preferred way of offering new software.

Offering software on CD-Rom also cuts down on piracy, because It is extremely time-consuming to copy up to 600 Mb from a CD-Rom on to floppy disks - or the hard disk of another computer.

For users, software pub-lished on CD-Rom lets them get to work more quickly. There is no sitting in front of the computer constantly inserting new floppy disks while the software is being installed. Users installing new software from a CD-Rom typically just have to issue the necessary commands to set up the software and can then have a cup of tea while they wait - without worrying that the computer will be screaming for

attention every few minutes. in addition to its popularity as a distribution medium for commercial software, a new breed of affordable, recordable causing many corporate com-puter users to turn to CD-Rom the near future. as a fast and inexpensive way of backing up their vital corporate information. In the US, for example, CD-Rom recorders are available for less than

\$1,000 and allow users to create CD-Rom discs that can be played on any standard CD-Rom drive - as well as play standard CD-Rom dises from commercial veodors. street price is about \$1.099). For example, Pinnacle Micro (a pioneer in the CD-R business), introduced a new Recordable CD system in early

January with a starting price of only \$995. Known as the Pinnacle RCD 5040, this system is distinguished not only by its low price: the performance is also superior to that of many previous CD-R systems - while it is a 2X CD recorder, it can read CD-Rom software at 4X (quad) speeds. The company expects the RCD 5040 to appeal to both the corporate and consumer markets for data archiving and making low-cost, cus-

The new RCD 5040 Recordable CD system replaces its predecessor. the RCD 5020 and comes in both internal and external

Pinnacle suggests that it has a good shot at the traditional magnetic tape backup market hy offering CD-R systems at this price with improved performance. For this reason, both Mac and PC versions include custom Backup Utilities which allow you to create permanent archives of data held on a hard disk. Pinnacle says the PC version, CD Archive, offers the only Microsoft Backup Compatible utility for backing up data to compact disc.

Not surprisingly, the comcany is hullish on this product - and the whole CD-R market "The CD-R market is exploding." said Scott Blum, executive vice-president of Pinnacle. "We are expecting sales to continue growing rapidly." He CD-Rom - known as CD-R - is systems will replace tape drives.

drives and CD-Rom players in

Equally enthusiastic is Hewlett-Packard, which also launched a low-cost CD-R system last October. HP's entrant in the low-cost CD-R race is an internal DOS/Windows offering known as the HP SureStore CD-Writer 4020i and its recommended price is \$1,249 (although the company says its

Until the release of the new Pinnacle system, the SureStore CD-Writer 4020t was one of the few CD-R systems at anywhere near the \$1,000 mark that offered 4x CD reader and 2x CD recorder capabilities which installs in a PC's half-height 5.25-inch bay. As with most CD-R systems,

it lets you record up to 650MB of data or 74 minutes of audio on a single CD-R disc. It also reads standard digital and audio CDs. And as with the Pinnacle system, HP included a collection of bundled applications to make the offer more attractive. The CD-Writer 4020. includes a utility called Easy-CD (an extension of the Windows file manager that works with the CD-R drive), another called Alchemy Personal (which is supposed to let you create and search custom databases and includes a runtime search engine for use on any PC with a CD-Rom drive). one known as Magic Lantern for photo CD viewing and finally something HP has dubbed Easy-CD audio, which lets you create your own custom audio discs.

The higgest attraction for any of these drives is that they offer tremendous value in terms of the cost per megabyte for long-term storage of data. In the US, the street price for hlank CD-R disks has dropped to \$12 or less. And when you consider that you can get 650 Mb for this price - or more, if you use compression technology to store the files - this is far cheaper than using 500 or more floppy disks or even the even predicts that CD-R hlank media for many tape

limely.

To a company of the same

Colored to the state of the

Andersen Consulting says its

comfortable couches for chatting with colleagues. The lounge area does not have to he booked, but lounge lizards be warned: Andersen's launch information says the lounge "enables everyone to relax for short periods of time

or picking up messages. Whatever the office of tha future looks like, it won't mean

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# Document management - By Geoffrey Wheelwright Hanover New era of integration dawns

printers, scanners and fax machines will all live on the local area network

ocument management is now being tigntry integrated with existing personal computer-based local area networks (Lans) by means of advanced office

The clearest indication yet of this came late last year with announcements by Hewlett-Packard and Xerox Corporation, both of which pointed the way to a world where photocopiers, printers, scanners and fax machines will all live on the local area network to provide document management functions - and it will be network managers, rather than office equipment managers. who will be charged with maintaining and installing

HP's announcements came first. In early October the company unveiled a networking strategy for printers and associated products that it calls "received printing". The idea is that as documents are increasingly being received in digital format (for example, via corporate fax modems and network fax gateways) and are being distributed digitally (via elecmanaged over the network. tronic mail), there will be a shift towards allowing users to decide how and when (if at all)

those documents move from computer screen to paper. For example, rather than the cumbersome task of passing around a company internal memos and received faxes on paper, the network would handle the process digitally and users would decide for themselves which documents they wanted to print out - and which devices they would use to print them out.

In a speech at the annual Fall Comdex trade show in Las Vegas, Richard C. (Dick) Watts. HP vice-president and general manager of the Personal Information Products Group, elaborated on the HP strategy.

Mr Watts said that HP wanted to change the way docdescribed what he called a new productivity, expressed in the

"distribute and print" model for paper management which would eliminate the older and inefficient print-multiplecopies-and-distribute model.

The "distribute and print" model allows network scanners to serve as efficient and versatile on-ramps to the information highway or network system. The idea is that when HP network printers are combined with HP network scanners, information can enter the network system easily - then be delivered electronically and

printed as multiple originals. Xerox also took a similar line last October when it launched a family of digital document office systems that allow users of networked personal computers and work stations to perform new document production and distribution services from the desktop. The company says these systems are designed to create "a new category of office device that improves office productivity by hringing an array of advanced document services to the desk-

But what the new Xerox Document Centre System 35 (designed for up to 50 users on a network) and Xerox Docnment Centre System 20 (designed for up to 20 users on a network) machines really do is provide office equipment that is used, controlled and

These systems are likely to move responsibility for many forms of traditional office equipment from the office and office equipment manager to the network manager - as the performance and reliability of the network now become vital to the proper operation of this new generation of office equipment. In addition, it will be the network that will tell users and administrators alike whether a given machine needs toner, needs to have a different size of paper loaded or has run out of staples.

According to Paul Allaire, chairman and CEO of Xerox, there has been a problem in how the documents used in an office have been perceived. "Until now, offices have been networked, but documents haven't," he says. "Gains in uments were handled and he individual output and personal

tal documents from PCs, software and networks, have not translated into gains in the productivity of work groups. This is because a variety of incompatible user interfaces, formats, operating systems and network environments make distributing and sharing these documents difficult. Technol-

ogy often gets in the way, caus-

ing delays, bottlenecks and non-productive steps in peo-ple's work. It's a clear and pressing problem." He suggested that by making documents a network resource. much greater value can be gained from them. "There's a deeper issue - the work group where people work together creatively and collaboratively in teams is where the collective knowledge that typically creates business value is

shared, built and used." suggested Mr Allaire. "Energy which should go into the work itself - creating content and adding value to information - is diverted into

and bottlenecks and doing what people consider to be unproductive, mundane tasks. This is a root cause of lagging office productivity and mounting worker frustration." The Xerox solution is the

company's new Document Centre product. "We called it Document Centre because we believe it will be seen as a real centre of expertise and centre for services that knowledge workers can go to and depend on for managing the daily flood of inputs, outputs and processing tasks that characterise the cycling of documents and the cycling of knowledge work," said Mr Allaire.

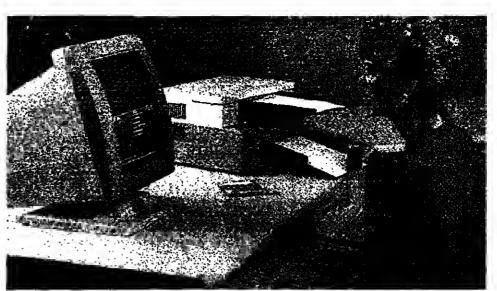
"At one level, Xerox Document Centre customers will be scanning, faxing, printing and copying - from anywhere in their workspace. At another level, they will be using, gathering, huilding, creating and sharing the knowledge needed in their work. Until now, our

desktons have been connected electronically through networks. With Xerox networked document systems, the vision is we can connect our Ideas through documents.

With this new category of office document systems, we believe that many of the frustrations, delays and bottlenecks will gradually fade into the background and more energy will be channeled into the creation and enhancement of content - the good work we call 'knowledge work.'

But the real question in offices around the world will be whether or not it actually solves any problems. There may well he many

advantages to be gained from an office where document distribution takes place principally over the network - but the teething experiences that a large number of corporations bave had with the reliability and implementation of new network-hased services could well colour their judgment in accepting the idea of technolo-



As office documents are increasingly received in digital format - for example, via corporate fax moderns and network fax gateways - and are being distributed digitally, via electronic mail, there will be a shift towards lowing users to decide how and when (if at all) those documents move from computer screen to paper

together.

The key to the success of this kind of technology will lie in whether or not it really does add up to more than the sum of its parts. That has so far been the downfall of most faxcopier-printer-scanner "multi-

whole bunch of services ment management services - they do not do any single function as well as the hest of their single-function counterparts. They also require that you commit yourself to a single device when some users are wary of having all their technological eggs in one basket.

gies that try and bundle a function" products and docu- After all, when your fax machine goes down, it does not usually take your printer. scanner and photocopier with it. But on a multi-function device it does. And on an networked multi-function device, used for document manage ment, that could affect a lot of

■ Office computing: - report by Joia Shillingford

# Strong demand for client-server software

The latest products are providing better security and performance monitoring

arly client-server systems often served a single department, but now they are spreading throughout whole organisations. Companies are starting to base their whole computing environment on the clientserver model, where processing is shared between "client" PCs and mnre powerful "server"

systems. Citibank opted for a clientserver solution when it wanted to offer common funds transfer (FT) across Europe. It is using a combination of the Windows NT operating system (on servers and eventually on PCs) and Microsoft's SQL Server database as a starting point for

entering details of FT transactions, which are still processed on the mainframe. But key processes are gradually being moved off the mainframe and onto Compaq servers running SQL Server.

Company-wide client-server brings new management challenges. For example, IT managers must work out what data is required throughout the organisation and where it should best he stored to minimise network traffic. They must also work out how to integrate the company's older computers (such as mainframes) into the new environment.

Another challenge is to design a client-server system which is flexible enough to cope with changes in the com-pany's husiness. "Some clientserver systems are in danger of becoming legacy systems (systems that can't adapt)," says Eric Woods, a senior con-



sultant at researchers Ovum. Mr Woods believes that companies designing their own client-server development tools and middleware isoftware for and let vendors worry about extracting data from different connectivity and staying up to

systems) are "crazy". The complexity of clientserver means that you have to delegate some of these issues,

The good news for users is that client-server software is improving. The latest products are providing better security and performance monitoring. They are also easier to use. In particular, more and more

suppliers are competing to

date," says Mr Woods.

establish their middleware products as the industry standard. "Good middleware should make a complex distributed environment look like a single machine even if It includes Windows PCs, local area networks, Unix systems and mainframes," says Woods. The six types of middleware

☐ Database connectivity products, such as those offered by Information Builders: ☐ Remote-Procedure-Call (RPC) based systems. RPC is one of the fundamental build-

ing blocks of middleware:

☐ Message-oriented middle-

□ Object-request-brokers (Orbs). Choices include Microsoft's Ole (object linking and embedding) and lona's Orbix. The Object Management Group is attempting to define an industry standard for Orbs; ☐ Distributed Computing

ware, such as IBM's MQ Series;

Environment (DCE) based systems, DCE services (included with powerful systems from IBM. Digital Equipment etc) help to make several linked machines look like one Products which simplify the process include Entera from Open Environments and Encina from IBM (based on a TP-Monitor); and ☐ Distributed Transaction Processing (TP) Monitors eg Tuxedo from Novell and CICs from

Object-request-broker products are probably closest to

Continued on next page

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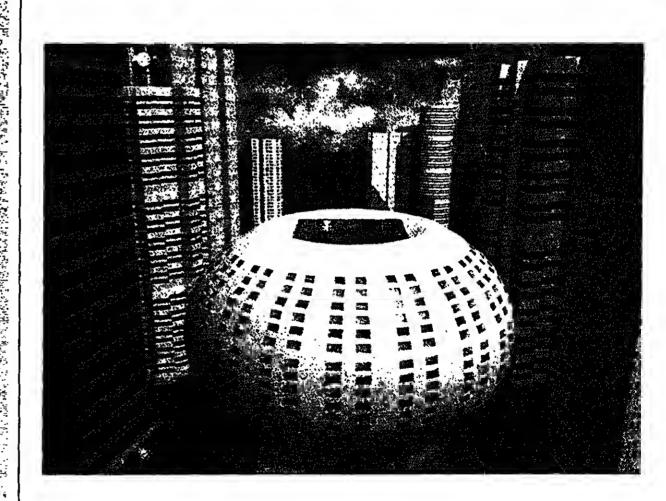
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■ Mobile computing/remote access - By Michael Dempsey

# At home with the office

Getting mobile staff online via their notebooks justifies the cost of expensive state-of-the-art equipment

recent survey of 400 notebook PC-users throughout the UK, Germany, France and Sweden revealed that most users still do not link their portable computer to the office network. A poll carried out on behalf

of PC-maker Dell by IDC, the research group, shows that less tban half the companies in Europe using portable computers also support remote communications. This compares with 80 per cent of similar US companies linking notebooks to the office.

In the Dell-sponsored survey, 35 per cent of respondents said their notebooks were not connected to the office. Notebcok users tended to take their machine home, working from there for an average of 5th hours a week. But only 30 per cent accessed office resources when working from home.

Because Dell makes noteinterest in encouraging their use among the working population - and the company uses an attractive argument to encourage remote access: getting mobile staff online via their notebooks not only increases personal productivity, it also justifies the cost of expensive state-of-the-art equipment.

Dell claims that an aggressive attitude to remote communications means the return on investment can occur before half the depreciation period has gone by.

One company that has taken this message to heart is clothing rental giant Sketchley Textlle Services. With a £55m turnover and 1.800 employees. Sketchiev keeps a significant

Alistair McCrae: his staff at Sketchley use laptop PCs to help maintain wearer records" on the company's 650,000 end-users

portion of British industry in clean work garments. Some 650,000 people, working for companies as big as Ford and British Aerospace, wear overalls and uniforms issued by Sketchley. These clothes are rented by the customer, with Sketchley undertaking to replace worn-out items and keep up with the employee's

lt is en enormous task whlcb used to be carried out by a field force wbo were equipped with paper forms and who had to key in data when they returned to their offices.

Sketchley bas 30,000 husiness customers who can send rented garments to any one of seven regional centres - and the company then has to return each garment back to the person wbo wears it. Field staff armed with Compaq laptop PCs are the key to maintaining this service. Alistair McCrae, sales and

services director at Sketchley. explains that personal contact is the only way to match the company's product with the continually shifting profile of customer employees. "We have to keep making inquirles to know that the contract is meeting expectations. You have to talk to the people you're clothing. Are they getting fatter or thinner? Have they changed jobs and do they need a new

McCrae's staff maintain wearer records on every one of its 650,000 end-users. The records detail the name of the staff member and give individual ontfit size and type and they also note how often a garment is changed. In the food industry, byglene requirements mean that this will be every day. Garments are turned around in one week, and Sketchley receives 10,000 requests to alter garments

Il this data is held on a A large Digital Vax main-frame computer. But this machine is fuelled by regular input from the field force. The key 'data window' at Sketchley lasts six hours and begins at 10pm every Sunday. Field staff plug their laptop into a home modem line by 10pm and during the next six bours the laptops are polled by the mainframe operation.

Development software from Cognos, costing £250 for each laptop used by the 30-strong field force, allowed Sketchley's data processing manager George Donnelly to design a

data downloading regime that was compatibla with tha group's mainframe.

The total cost of moving from paper to a laptopequipped mobile workforce came to about £80,000, but McCrae says this is money well spent, citing the competitive nature of the commercial garments business.

Sketchley has a £4m pro gramme to issue all 125,000 employees of J. Sainsbury, the UK food retail chain, with an entirely new uniform. The shift from a familiar orange outfit to tha new blue uniform was a big exercise in product branding. There cannot be any delays in such a huge marketing exercise.

Sketchley relied on the laptops to gather and transmit rel evant data on the client's workforce and the reclothing of Sainsbury took 21 months. With 23 years at Sketchley and a long time in the field writing down measurements on paper Mr McCrae has no doubts that remote access is the only way ahead - "wa're in a highly dynamic husiness. We need to change as the customers

The US has led the way with remote access but as Sketchley illustrates, Europeans are catching np. Symantec, a \$750m software house, sells PC Anywhere. This £149 package allows portable PC users to dial in from an outside location and replicate the facilities of an office machine on their lapton screen. So a technicallyoutdated machine can call up software running on the latest Pentium workstation.

Symantec claims a million users for this product; 70 per cent of them in the US. However, the company believes that a change is under way; Scandinavian companies, faced with staff distributed over remote and difficult terrain, are signing up for PC Anywhere. As company accountants demand better utilisation of expensive portable PCs,

nology is about to hit the hig time. It put the annual growth rate across Europe at more 40 per cent. A UK survey by Computer intelligence for network equipment vendor Eicon Technology, found that 78 per cent of technology managers expected their use of ISDN to increase

> Yankee Group says that promotion by the public network operators, especially in Germany, tha advance of tha Euro-ISDN standard, a boom in software applications and rising demand for access to the Internet were the main causes of the growth.

In the past couple of years, many retailers for routine nationwide.

Cordless

extensions are

three times as

standard corded

Media mogul Rupert Murdoch

believes that we are moving to

a wireless world and - with

MCI, the long-distance phone

company - bas bought a US satellite TV network to prove

lt. The plan is to use this, not

just for television, but also to

give businesses and consum-

ers high-speed access to data

services, such as the internet.

Part of the impetus for wire-

less office services comes from

users' experience of mobile

telephony. They are starting

to want the same convenience

and flexibility inside the office

But, as with mobile tele-

shony, wire-free solutions for

the office tend to come at a

The cordless PBX (switch-

board) market increased in

1995, showing that some users

are willing to pay a premium

for cordless functionality, says

Diane Trivett, an industry

analyst at Dataquest - "but to

realise full market potential,

the price needs to fall fur-

Cordless extensions are

three times as expensive as

standard corded ones. But

they can help to improve cus-

tomer service because it is

easier for callers to track

down the person they want. If fewer calls are missed, the

organisation will also spend

Cordless phones

as they get outside.

premium

ther".

expensive as

High-speed ISDN lines A central concept for converging technologies

> Fast digital phone links deliver voice, pictures and even videoconferencing, writes George Black

credit card validation. They also increasingly use ISDN lines for polling their branches to gather sales figures. Some bave replaced modems by ISDN, though modems are becoming faster and cheaper and cannot yet be written off. Virtually every sector of the economy has taken up ISDN,

Reaching a wider audience: British Telecom's new visual comm

central plank among the convergent technologies

underpinning the information

society of the twenty-first cen-

tury.
Digital voice and data tele-

communications systems

worldwide are being built on ISDN and it is likely to become

few years.

mature market in the next

The international digital net-

work is becoming popular because it gives faster and

clearer connections than the

old analog network. Businesses

appreciate it either because it

is cheaper than the alternative

methods of communication or

because it enables them to do

things they could not do before

- or both. in some cases, ISDN

may represent a significant

major influence on the infor-

mation technology of the

future," says June Campbell,

ISDN husiness development manager for BT, the UK's larg-

While ISDN is a 1970s' con-

cept that met with slow imple-

mentation, a European study

by the Yankee Group Europe

last year concluded the tech-

"It will undoubtedly be a

competitive advantage.

est ISDN operator.

ranging from manufacturers transmitting design drawings to bospitals remotely accessing X-rays, to colleges introducing distance-learning programmes. Recently, ISDN has extended its customer base from large companies to medium-sized and small businesses.

Design companies use it to pass their artwork to advertising and public relations agencies and their customers for comment before sending it, again via ISDN, to the printers.

Benefits

These companies often like to conduct videoconferencing over ISDN, so that they can discuss their work face-to-face with their customers.

Many people in these types of small business are now teleworkers, who could benefit from remote access to their customers' local area networks. BT wants to target them as potential ISDN customers, but this calls for an improvement in the network's

increase that coverage to virtually everyone in the country who might subscribe to ISDN. If these tests succeed, BT may launch a marketing campaign aimed at teleworkers The spread of ISDN has been

BT's trials of new equipment

this year are intended to

boosted by the forging of international standards. As Euro-ISDN has gained in credibility, certain countries outside Europe, such as South Africa and Israel, have recently moved towards adopting it. In the US, too, there bas been growing interest from regional phone companies. International connections can still cause problems, but these are gradually reducing.

Standardisation is expected to force equipment prices down. Euro-ISDN clearly demonstrates the virtues of the sin-

ISDN products in 15 countries at once, though there are still extra tests to be undertaken in some countries before equipment can be connected to the public network.

Racal's senior marketing manager Colin Watts says the advance of Euro-ISDN is "an enormous step forward". However, a few doubts still cloud ISDN's prospects: one issue is bow it will relate to ATM Mode), a networking standard

which has technically much in common with ISDN and is also being bailed as an essential feature of converging technolo-Experts remain unsure about

what will be the relationship between broadband ISDN, the newest version of the system. and ATM. The present signs are that they will be comple mentary, rether than competi-

"Large networks may well bave ATM backbones and ISDN spokes, says BT's Jone Campbell ATM's advantage will be its power, whereas ISDN's strength will lie in its flexibility, in ber view.

Another problem is that many users do not understand how to instal ISDN most effectively. Racal's Colin Watts says there is still a need for an edu-

prices for ISDN than some of its European counterparts. Equipment vendors have urged it to change this, arguing that BT's costs for installing ISDN have fallen, so its customers' bills should also fall. But BT responds that it is constrained by the regulator Oftel, which frowns on cross-subsidies from one business area to another.

Cable television companies now offer ISDN, which may reduce its charges

# gle market. Racal-Datacom of the UK the role of BT, which mainwas able to introduce-Euro; stains considerably higher escape from

Adam's challenger AUGUST TO THE STATE OF THE STAT

of the Bart

■ Cellular telephony - By Joia Shillingford

# Mobile telecom services seek ways to add value

Orange will soon introduce a 'Mystic Meg' astrology line and a sportsline

'n 20 years' time, mobile voice calls will be virtually Lirce and suppliers will make their money from value added services (VAS).

The services offered by PCN Personal Cummunications Network) operators such as Drange and Dnc-2-Dnc, and GSM (Global System for Mubilel operators such as Vodafone and Cellnet are not that different. This is because PUN is simply a variant of the GSM digital standard.

The main difference is in which services they charge for and how hard they promote

The most popular VAS of all is voice mail. Vndafone says it has 550,000 subscribers for its Rreall voice mail service. And at soon-to-be-floated Orange, voice mail and Calling Line ldeutity (which flags up the caller's number) are the most popular value-added services. Hubert Tardien, head of

Sema's telccoms husiness, says: "Mobile network operators like vuice mall because it generates extra revenue without them having to charge more." Most operators provide free voice mail, but carn more when subscribers phone back the people who have left them

There is also a growing number of informatinn services available to mobile users. Vodafone is about to introduce a share information service.

which will display prices on a month exclusive agreement mobile's liquid crystal display with Vodafone, but other

and a Sportsline. Mercury One-2-One's smartuseful fixed-line numbers for Interflora, Ticket Master, AA

number of mobile data services. These fall into three categorles according to David Danieli, a spokesman for Voda-

service

This facility - SMS - is rather like paging and allows alphanumeric messages of up to 160 characters to be sent to a GSM mobile's LCD. Short messages can also be sent from a GSM handset by pressing certain keys repeatedly, for examplc one press equals a, two presses equals h and so on.

2110 costs £100 from Vodacall. The user will also need to buy an extra klt costing £49.95 that

Orange will sooo introduce a Mystlc Meg line (astrology) on a similar concept.

services and so on. There are also a growing

Short message

If this sounds cumbersome. short messages can also be sent from a Psiou 3a Drganiser linked to a suitable phone (a Nokia 2110, Orbitel 945, or Phillps 747) and Vodafone's GSM

A phone such as the Nokia

includes a cahle and software. The cable plugs into the phone: the card at the bottom end of the cable plugs into the Psion. Sending short messages from a Psion is easier than from a mobile handset because it has a full (though not full-sized)

organiser suppliers, such as Texas Instruments, Sharp and Hewlett-Packard will soon bring products to market based

PC. SMS is cheap at 10 pence a message and it is possible to get an SMS-only tariff. There are roaming agreements allowing interoperability between Vodafone and some other European GSM operators. Or between Cellnet and other

operators. However, there is no SMS Interworking agreement between Vodafone and Cellnet. according to Danieli. So a Vodasone user cannot send a short message to a Cellnet

In addition to SMS, GSM mobile users who travel with a portable computer can buy a kit to link portable and phone. Again, they will need to use a phone designed for data such as the Nokia 2110. They will then be able to use the portable to send and receive electronic mail, access databases or send faxes.

Among PCN users, Orange customers have access to mobile data. One2One users will get data services later this year (as well as CLI and inter-

national roaming). However, one drawback of sending data over cellular is are not particularly high: speeds of up 9.600 hits per second are typical. On the plus side, mobile data is far more convenient than trying to hook up a modem to the hotel

Most of the new value-added

services are being offered for digital networks, which are harder to clone or bug, and better for data. However, new security features are being introduced to prevent cloning on analogue networks.

issue its analogue subscribers (it has analogue and GSM networks) with a special Personal Identification Number. This must be typed into the handset and thereafter it will generate a series of random security PINS

This means that even if a would-be phone cloner could crack the code, by the time he/ she had done so, it would prob-

ably have changed.
The authentication feature will work only on handsets designed to accept authentication (usually manufactured after May 1993). These are owned by about half of Vodafone's two million analogue subscribers.

As many as several thousand might prove faulty and, if so, will be replaced free of charge by Vodafone. Other Vodafone analogue subscribers will either need to buy a new phone (with huilt-in anthentication PIN), or transfer to a GSM ser-

To find out their new PIN, customers need to contact Vodafone's authentication centre, or their service provider.

Future

The future promises all sorts of exclting value-added services for mobiles. Mr Tardieu thinks digital mobiles (with SIM - subscriber identity module - smart cards) could be used as payment devices in a

include all sorts of Information that identifies the user in the smart card, which could also have credit/debit card features

DECT as the cordless office

Window on a wireless future standard of the future, but Northern Telecom has had some success with CT2.

Dual-mode handsets are also being developed. These are cordless phones, working to the DECT standard, in the office; and mobile phones, working to the Global System for Mobile [GSM] standard,

Val Simpson, product marketing manager at GPT Communication Systems, believes that "the future of mobile telephony for businesses has to be dual handset working".

outside it.

At present, key drivers for the cordless PBX (CPBX) market are the introduction of new products, improved distribution strategies and falling in the early days, users had

only a few CPBX suppliers to choose from: Nortel, GPT and Ericsson. Now most of the traips and Siemens.

More new entrants are expected in 1996, including Panasonic, Hagenuk and Bosch Telecom, together with new products from existing players Ascom.

that the European digital CPBX market will grow by 500 per cent from \$115m in 1994 to \$716m. in terms of shipments, the market will increase from 4,500 systems and 82,000 cordless handsets to 62,625 systems with 1.9m handsets. DECT is expected to

growth area in future.

■ Wireless computing/office telecoms - By Joia Shillingford

ditional PBX suppliers are in the market. They include: Alcatel, Ascom, AT&T, DeTeWe, Matra, Peacock, Phil-Vendors, such as Mitel and Multitone, act as value-added resellers for others' systems.

ich as Siemens, Matra and By 1999, Dataquest predicts

account for 85 per cent of the market in terms of system shipments, leaving CT2 with just 15 per cent.

But these take-up levels will only be achieved if the price differential between cordless and fixed systems falls even further. Another premium-

wireless local area network (Lan). Computer suppliers such as AT&T and Digital Equipment are still very much in favour of wireless Lans and believe that they will be a

This bas yet to happen. Mark Purdom, a research ana-

lyst at Dataquest, says that most wireless Lans cost three or four times more than a wired Lan, are less standardised, and operate at less than

Rupert Murdoch: making plans for a wireless world

10 megabits (Mbps) per second, (the standard for wired Lans). A typical wireless Lan costs between \$800 and \$1,600 per user.

Computers or cash tills in a wireless environment contai radio interface cards and antennae that send a signal to the nearest base station. -

A series of base stations (usually mounted on the celling) provides a backbone network that links all the devices together, enabling them to send and receive information or transmit it to a central computer.

Most wireless Lans use radio frequencies to exchange information. But other tech nologies such as infra-red (s beam of red light) and microwave (high frequency radio waves) can also be used.

Some wireless Lans, such as that offered by Digital Equipment, allow seamless roaming for users with portable computers or organisers.

This is useful in a retail environment, where portable devices are used for stocktak-

Wireless Lans offer a num ber of benefits. They can be installed in listed buildings, which are hard to cable. They are flexible, so it is easy to add new personal computers or put extra wireless cash tills on the shop floor during busy periods. Wireless Lans, are also quick to install and can cut costs if PCs or POS (pointof-sale) terminals are moved frequently.

Mr Purdom says the advantages offered by wireless Lans "have given them some success in niche markets, hut they haven't yet found a winning borizontal application. Until they do, they will remain a minor product area". For a minor product area there are plenty of suppliers:

about 25 worldwide. Among them are 3Com NCR, Norand, Olivetti (which has developed 10 Mbps-a-second wireless extensions for Asynchronous Transfer Mode networks), Telxon, Proxim, Siemens Nixdorf, Symbol, Photonics and Motorola.

Most of the world's leading computer vendors sell wireless Lans, often made by other

The Yankee Group, a USbased research consultancy. believes that the Wireless Lan market will be worth \$1,107.2m by 1998, with \$725m of this coming from vertical applications, such as retail, medical, warehousing and distribution.

## Strong demand for client-server software

keyboard. Psion has a six-

Continued from previous page

what users want but furthestfrom full realisation. They canmake different software appllcations behave as if they were one. The idea is that each block of code retrieved by the Orb contains not only data, but the instructions to process IL

"But in the end, users don't really care what the underlying technology is, they just want the environment simplified so that it can answer busiuess needs," says Mr Woods. As well as middleware, com-

panies need client-server tools

to build applications. Popular

tools include Microsoft's Visual

Basic and, for larger networks,

Seer from Seer Technologies or

The tools used in early cltent-server networks, such as Powerbuilder and Visual Basic, do not bave the capabilities to support large, complex development environments," says Mr Woods. "People should be

looking for tools that hide complexity but give greater flexiserver systems become more established, there are many more ready-made software applications to choose from. R/3, a financial package from SAP has sold well. Other client-server based applications

Forte from Forte Technologies.

offering finance and other key business functions include CS; 3 from Tetra and SmartStream from Dun & Bradstreet Softdoing the job.

ware. Benefits such as low upfront costs and fast applications development are helping to drive the client-server market. According to a Tetra/Computer Weekly survey, 58 per cent of companies interviewed plan to move to client-server in the next two years.

Many client-server networks are based on so-called "fat" clients: usually PCs with a lot of local software and memory. But the notion of using internet Web technology to link dissimilar company systems is taking bold. For certain applications, "thin" clients which simply view information on remote systems, can be one of the most effective ways of He says it is possible to

In the UK smart cards are not widely used in banking. but Mr Tardieu says a leading British bank is testing a mobile smart card/credit card combi-

Mr Tardieu says: "The ability to pinpoint the location of a mobile user could also be used to good advantage by emergency services and others." For example, if a mobile user phones 999 or the AA, the call could be transferred straight to the nearest police station or "Such services won't happen

immediately, but when they do

they will really add value for

the mobile user," says Mr Tar-

less money calling people There are two standards for cordless office phones: DECT (Digital Cordless Telephony) and CT2 (the digital technology behind the former Rabbit telepoint network). Most see

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# Security: a crucial issue

Dean Adams examines the defaults are enforced by the standards, for system installation, startup and restart. client-server environment

There is a widespread perception in the computer industry that the mainframe is 'safer' than the clientserver environment. This is a misleading assumption Both environments suffer, in equal measure, from the biggest threat to an organisation's security - internal attacks on the system. Computers are still operated by humans and humans are still prome to error and, in a few cases, malicious intent

in short, distributed computing is no more inherently weak than mainframe computing. External threats, though a real problem, are generally responsible for fewer losses than those that are internal to the organisation. In the distributed world, problems ariae hecause distributed systems may be more complex and therefore harder to manage.

The level of security features incorporated in hardware and software productions is dependent on what each individual vendor decides. This causes problems of portability and interoperability for the customer, leading to what amounts to proprietary lock-in.

An organisation which is currently helping to solve these issues is X/Open. An independent and non-commercial body, its membership comprises vendors and users who are intimately involved in the development and piecing together of standards for practical use in tha commercial marketplace

X/Open is developing, with its members, a set of de facto security standards for the computing industry. These will aim to set and enforce a new superior level of security capabilities for distributed systems, The standards will be known as the X/ Open Security Brands and be to the computing industry what the kitemark is to the consumer industry.

The brand will bring benefits to both vendors and users. Vendors will be able to demonstrate significantly improved security capabilities without incurring the extra costs of undertaking security evaluations. Users will get peace of mind as well as lower costs. Lower costs will result from not having to pay the extra premium for security features as the X/Open brand becomes an industry standard.

Additionally, there will be fewer damaging and costly incidents likely to occur from inadvertent user errors or due to

X/Open is creating detailed standards that can deal with the distributed computing environment. These are in the following areas: secure communications, cryptographic systems, distributed auditing and single sign-on.

Encryption is a necessary supporting technology for secure communications. In the nascent world of electronic commerce. proper encryption will be the deciding factor in its success. However, encryption is a contentious subject: indeed, governments are restricting the import and export of encryption and in some cases, the use of any form of encryption. This may smack of Big Brother, but the thought of criminal organisations being able to carry on their activities completely undetected by law



Dean Adams: 'Encryption is necessary'

enforcement agencies ia a worrying one. However, these issues need to be resolved if business is to be able to take advantage of the enormous opportunities offered by electronic commerce.

Work is going on to resolve those issues and to define standards that will provide practical solutions for the commercial marketplace. For instance, it may be possible to define an electronic warrant that would enable law enforcement agencies. (subject to due process of law) to obtain access to encrypted information where they suspect wrongdoing.

X/Open is in favour of allowing business to use strong encryption to protect its assets and its communications. However, if provision is not made for law enforcement to continue in a practical manner, the restrictions on import/export and use of cryptography are likely to continue. Therefore, X/Open is examining mechaoperation by non-skilled staff because safe nisms to allow for law enforcement agency

access. (having followed the due legal process). Public keys should not be beld by anyone accept the owner.

The development of standards for the Public Key cryptographic mechanisms is also high on the agenda. The idea behind this cryptography is ingenious but simple: anyone can encrypt a message but only the receiver can decode the message.

Two keys are created: a private key and a public key. These are created as a pair, by a complex mathamatical algorithm. The sender must encrypt its message with the "public" key of the receiver. The receiver decodes the encrypted message with "private" key.

Only the receiver knows the identity of the private key, which is individual to the

X/Open is developing a Single Sign-On tandard, whereby users log oo once only. Currently, the practice of dedicating a password for each computer system that a user requires access to results in too many passwords for individuals to remember as they move around departments. The growing rise of the Internet adds an

extra dimension to security within a distributed systems environment. The internet provides very little in the way of support for secure communications, but stronger mechanisms are on the way, and within two years communication will be safer on the Internet.

Firewalls provide much-needed security protection that otherwise would not be available to users of system connected to the internet. However, even when things become safer, direct access to the Internet should be limited to a few machines on the corporate network, if not just the one.

Forcing all communications to go through a aingle firewall point-of-entry ensures that these communications have to pass through a stringently and tightlymanaged system. Organisations risk, once again, buman error to prevail if individuals are obliged to manage their individual firewalls.

Eventually, organisations will come to rely on standards that have been developed in an open forum. In these types of forums, vendors and users try to break the emerging standards. In true Darwinian theory, the standard that remains unbroken gets the K/Open brand. As the distributed systems environment evolves, the resulting changes will be reflected in the standards giving the user peace of mind. giving organisations continuing peace of

☐ The writer, Dean Adams is portability

■ Linking the systems - By Michael Dempsey

# A grand, global strategy

Novell, the software company, has an ambitious plan to expand way beyond the horizons of computer networking

etworking computers together is an accepted way of boosting employee performance, but wheo networks proliferate, or grow from the domestic local area network (Lan) into international corporate communications webs, then management becomes an issue. Novell is a \$2hn company

that has been dedicated to networking sinca 1983. Novell's success has made it the number two software company in the world after Microsoft. The fact that its name is nowhere near as well-known as Microsoft is testimony to the submerged nature of networking software.

Noveil claims 50m users worldwide, and is employed in 88 per cent of Fortune 1000 companies. But it is a fair bet that many of those users never give a thought to the ideotity of their network supplier.

Some companies would be alarmed at this state of affairs, but Novell has come to terms with the fact that most IT users prefer to get an with the task in hand and ignore the technology that enables them to do it. The IT product that gets used is the one that takes up the least time to mas-ter. Now Novell has an ambitions plan to expand this principle way beyond the horizons of computer networking.

The Smart Global Network, or SGN, is Novell's grand strategy for linking up an enormous number of potential sites. The key to the SGN is the notion of intelligent devices; any object that contains a microprocessor.

Currently there are 10 microprocessors installed in assorted pleces of domestic and commercial equipment for every one inside a PC. By the end of this decade, that proportion will have become 50 to one. The SGN should exploit the untapped potential of these devices, activating the embedded intelligence in thousands of different pieces of equipment. One simple log-on procedure should suffice for



## Network Management

As companies become increasingly dependent on networks, the skills to manage them become critical. Here and on the following pages, FT correspondents examine key issues

users the world over, using PIN numbers to address their own PC and linked devices. Novell foresees a world in which individual vending machines will send a messag down the line to inform the catering contractor that stock is running low. If the SGN pans out as its authors bope. individuals will be able to send messages from anywhere on the planet. This network will encom-

pass mobile phones, fax machines and gas meters. For the individual it means getting in touch with home electronics via a mobile phone. For corporates, the SGN could reduce reliance on field staff. Utility companies could read gas and electricity meters from a central location withont sending employees to check customer consumption. Bearing in mind the breadth

of its application, Novell believes the SGN could create a global web with Ibn connections. No one company could possibly put such an electronic empire in place and so Novell is relying on a series of mntually beneficial alliances

ers and telecoms providers to spread the SGN gospel.

A software toolkit, Natware Embedded Systems (Nest), has been bought by 75 commercial organisations including fax manufacturers Ricoh and Canon and Andover Controis of the US. Nest costs \$50,000 and opens the microproces-sors embedded in users' products to the SGN. Netware Connect Services

(NCS) gives PTTs the right to offer SGN services. While licence charges to a PTT might amount to millions of dollars over several years, the potential payback is huge. The national PTTs of Australia. Japan, Germany and France have signed up for NCS, hoping to offer new services at higher tariffs. These premium services will exploit the combination of SGN and fibre optic cahling to deliver better quality data transmission.

When infrastructure investment is included, the cost of implementing SGN could run into tens of hillions of dollars. But the move to fibre optic cables is going to take place in



Novell President and CEO Robert J. Frankenberg: the company ins 50m users worldwide

any case, so Novell's SGN is hitching a ride on an industry trend.

NCS has also been bought by US communications giant AT&T, and looks like pruning the bills of many large corpo-

with electronics manufactur- rates faced with managing international voice and data networks operating over leased lines. By switching to the SGN world and employing NCS, a company could design its own native network and then effectively outsource the management of that network to a PTT. An important technical responsibility would

> sary for its own operations. The SGN will not wipe out network management as an nies to regain control of their

have been offloaded while the

corporate user retained what-

ever features it deemed neces-

data communications assets. Adrian Holonmbe is UK director of network services at Ascom Timeplex, a \$300m Swiss-owned maker of net working bardware. Mr Holcombe helieves that too many commercial networks are proving unreliable and failing to carry transmissions because the users do not

engage in strategic thinking. Capacity planning and analysis of traffic levels would allow the IT department to deliver a more reliable ser-vice," Mr Holcombe says, "but people are often preoccupied with finding a physical fault and fixing it."

Bay Networks is a \$2.2bn US networking bardware and software group that is developing products to operate within the SGN. Steve Jenkins, UK managing director, believes that network manage ment is about to become a lot easier. "Our goal is to take the complexity out of networking," he says. He sbares a common opinion that the internet is too chaotic for business users, "Novell's SGN will be like a professional Internet," he says.

The era of smart devices blipping signals across the globe is still some time off. But by the time Novell hits that one billion connections landmark, the headaches of logging into a system and the perils of keeping commercial traffic running smoothly just might be a thing of the past.

## E PCTVs By Pau Byor PC manufacturers struggle to escape from the bedroom

Most home PC owners keep their machines in the bedroom, the study or a spare room

ome computing has emerged as one of the 1990s. Having transformed business and the workplace, "the personal computer is now revolutionising access to information and communications in the home," notes Olivetti, the Halian technology group.

In the US, where computer usage is particularly advanced, 35 per cent of homes own a PC and 16 per cent of households with a multimedia PC have bought a second machine for their children.

In Europe, spending on PCs overtook television spending in the UK and Germany in 1994. Sales of Multimedia PCs this year are expected to account for almost half of overall home PC sales.

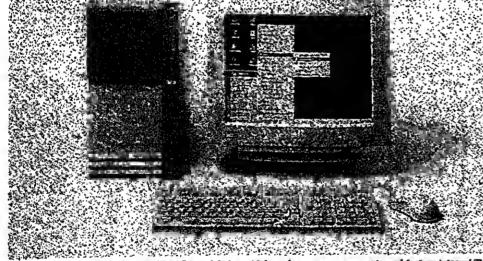
But despite the euccess of multimedia personal computers designed for home use over the past 18 months, PC manufacturers have still found it difficult to move their products out of the bedroom or study and into the living room. In Britain, a survey prepared for Packard Bell last summer confirmed that while the home computer is part of family life for about a fifth of UK households, it is usually kept apart from the TV, stereo and other home antertainment equip-

Most home PC owners keep their machines in the bedroom (22 per cent), the study (20 per cent) or a spare room (17 per cent). Only 15 per cent keep their computer in the living room which despite the supposed convergence of consomer electronics and computing, remains the domain of the television set and stereo system. Surveys elsewhere paint a similar picture.

....

... In an effort to overcome this segregation and build a broader base for their machines, some manufacturers have focused on building home PCs which combina most if not all the features of multimedia PC, television and hi-fi system.

Several approaches have been tried. The most popular, adopted by companies such as Compag, Packard Bell and Apple Computer, has been to build multimedia machines complete with CD-Rom drives, stereo sound cards and television tuner cards capable of receiving and displaying televi-



Nixdorf's new Scenic Multimedia models have high performance compo and audio capabilities as standard. Manufacturers of integrated PCTVs report steady sales for their machines, even though the typical viewing habits associated with TV and PC are markedly different

sion pictures on a standard PC

Another approach, favoured by companies such as Germany'a Siemens Nixdorf, Britain's ICL and Compaq with its new Presario 5220 has been to build integrated or all-in-one PCTVs. Most of these machines can display a television picture or telatext page either full screen, or in a windows-styla

Manufacturers of integrated PCTVs report steady sales for their machines, even though the typical viewing habits of TV and PC are markedly different - a PC is usually used by a solitary individual sitting close to the screen while a television set is often watched as part of a social gathering and at a distance. As a consequence, most analysis and retailers believe these hybrids have limited appeal confined to niche markets such as the student sector.

"Sales of computers that can also be used to view television and teletext are failing to live up to industry expectations," says Time Computer Systems, one of Britain's biggest direct sales retailers.

"The market is not ready for mass volume PCTV sales," says Colin Silcock, sales manager at Time. Tha company, which had been selling an extensive range of PCTVs, has withdrawn the systems and replaced tham with standard multimedia PCs and optional

plug-in TV cards. Nevertheless, in an effort to overcome consumer resistance, Olivetti launched a different kind of PCTV last autumn. Olivetti's innovative Envision

machine is black, stylish and looks more like a video cassette recorder or a stackable stereo component than a powerful PC. Envision has built-in loudspeakers hut it can also be plugged into a hi-fi system for better sound and connects with a TV set and VCR using standard "Scart" connectors.

Envision attempts to overcome one of the main criticisms of previous attempts to combine PC and television functionality - the inability of a standard television screen to match the high-definition image available from a dedicated PC monitor - by building in a device that eliminates the flicker and permits an acceptable quality of text.

livetti's machine is supplied with a remote control and a wireless infra-red keyboard with built-in trackball to provide the functions of a mouse device. Inside, Envision is still basically a traditional PC with an Intel 486 or Pentium 75 microprocessor, BMB of memory. floppy and hard drives, and a CD Rom which, in the top-ofthe range model, can also play the new digital Video CDs. In future, Envision will also operate as a set-top box, convertingthe digital signals of satellite

Apple Computer bas developed a similar device called Pippin - a boma electronics machine which delivars its sound and vision through a television, contains a Microprocessor, 6Mb of Ram and a CD-Rom drive. It adds a games place in the living room.

video-on-demand services into

analogue television output.

board, a mouse or local storage and uses the television for dis-

Pippin has, however, met with a mixed response. Indus-try analysis such as Forrester Research argue that Pippin, like other similar devices, "is in no man's land, more expensive than a games machine. less capable than a PC. Consumers who can afford a computer will buy one, the rest won't spend \$600 on a machine that can't do word processing." At £1,400 in the UK, Envision is aeveral times more expen-

Some analysts believe first generation machines such as Envision and Pippin could suffer the same late of other consumer multifunction devices such as Commodore's CDTV and Philips'a CD-i players. However, they were disappointing partly because of lack of software. In contrast, both Envision and Pippin run established operating systems -guaranteeing that far more software is available.

Nevertheless, they may still be ahead of their time. The multimedia home PC platform is still evolving as technology advances and new standards emerge. In contrast, most successful consumer electronics products, such as audio CD players, have been based on stable commodity-like technology that can be mass produced at low cost.

Botes Persont processor based PCs are pre-loaded where possible with Windows 95 a

environment is pre-loaded, it is supplied complete with program manuals and distertes.

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For that reason, most PC manufacturers assume it will be some time before the home PC ousis the TV from pride of



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**CLASS OF ITS OWN** 

■ Videoconferencing - By Geoffrey Wheelwright

# Kingpins focus on a standard

Intel and Microsoft announced plans to work with AT&T, PictureTel and other industry leaders

of huge corporations with dedicated satellite links or corporate chiefs with hig

It is enjoying widespread use and is even popular enough to be offered as an add-on service to existing personal computer

Consider, for example, the recent joint development work done hy leading videoconferencing system developer Picture-Tel Corporation and personal computer market leader. Com-Computer - which announced late last year the creation of an add-on desktop video conferencing system for computers using the Microsoft

Windows 95 operating system. Known as the PictureTel Live PCS 200, it is based on the popular H.320 videoconference standard, and is PictureTel's first product designed for use on personal computers running Windows 95. Its distribution in the US started in late November and it has a suggested US list price of \$1,995. The company has pledged to make the

Videoconferencing is no US in the first half of this year. The PCS 200 operates over basic rate interface ISDN digital telephone lines and is interoperable with all other Picture-Tel desktop and group videoconferencing systems, as well as standards-based systems from other manufac-

> The unique thing about it. however, is that PictureTel and Compoq designed it together for Windows 95 - an unusual collaboration between PC and videoconferencing companies. PictureTel is also including its LiveShare Plus data conferencing software - to enable remote users to share computer applications, transfer files and use a whiteboard and common clipboard - as part of the package.

Meanwhile, the two kingpins of the PC design husiness announced in January that they would focus on helping to standardise PC-based videoconferencing technology. Intel and Microsoft announced plans to work with AT&T. PictureTel and other industry leaders to achieve interoperable, standards-compliant parameters for

intended to help ensure that conferencing-enabled PCs can connect to each other and with multipoint services using industry-standard multipoint control units (MCUs), providing the same kind of simple connections people experience with the telephone today.

This standardisation will be around T.120, the International Telecommunications Union (ITU) standard for data conferencing, which was ratified in 1995. The companies say T.120 implementations are being designed by leading conferencing vendors for inclusion in

their products.
Intel and Microsoft, in co-operation with the Interna-tional Multimedia Teleconferencing Consortium. (IMTC), intends to bost a series of Interoperability events throughout this year to test aud resolve interoperability issues between desktop conferencing products, multipoint services, and application providers. The first event, scheduled for March 25-27 in Santa Clara, California, will test vendors' T.120 implementations to ensure interoperability across a wide range of products. Some 250 companies have heen invited to the event, including

"Microsoft supports T.120 and intends to work with the industry to achieve intemperahle T.120 solutions. We intend to provide a base level connection for widespread conferencing applications by multiple vendors," said John Ludwig, vice-president. personal systems division at Microsoft . "The ability to collaborate and share applications will signifi-

cantly enhance the productiv-The new British Telecom centre in Suffolk brings together

230 specialists lty of users of the Windows 95 operating system."

It is not only American companies that are doing leadingedge work in videoconferencing. British Telecom, for example, last year established what it calls the Centre for Human Communications at BT Lahoratories (BTL), Martlesbam Heath in Suffolk.

According to Dr Richard Nicol, who heads the new centre, its work goes beyond just the specific design of something such as a videoconference

recognised the importance of bending technology to suit peopie rather than the other way round," he says. "Our aim is to ensure that people get the best from BT's technology and that BT in turn has the best technology to offer. We have created a power-house that is unique in the world. We will focus on the challenge and opportunities presented by convergence between video and voice systems, hetween television and telephony, and between information and com-

munications."

The centre, part of BTL's Advanced Applications and Technologies unit, brings together 230 people working on video telepbony, videoconferencing, video and speech codlng, face recognition, speech and speaker recognition, textto-speech conversion, networkbased call answering, interactive speech services, remote presence, 3-d video telephones. multimedia datahases, virtual reality. human factors consultancy (including user and task analysis), usability valuation, user-centred design and the "psychology of telecommunica-

For those who do not want to wait for the results of all this

ncing industry, is doing joint research work will Collaboration: PictureTel, a world leader in the vide Compaq, the PC market leader. Pictured here is PictureTel's Concorde 4500 system

work - or only need videocon-ferencing facilities once in a wbile – service hureaux are starting to offer videoconferencing as part of their range of business services - along with courier services, photocopylng, faxing and desktop publishing. In the US, for example, some branches of the popular Kinkos office service outlets are now providing a videoconferencing

Kinkos provides for botb "Point-to-Point" conferences with one other site, or a "multlpoint" conferences with as many as seven different sltes at once. The company says that during a multipoint con-ference, the site which is speaking is the one that every-

one else sees and hears. If another site has a question or comment, the picture and sound are apparently deto automatically switch so that range o

Metwork services

## Doubts over links between electronic trading networks

Message formats can change in small but significant ways as they pass between networks, writes John Kavanagh

their big customers are going through mixed feelings about how easily companies should be able to send husiness transactions from one

network to another. The issue is a hig one for organisations seeking to gain the administrative savings and just-in-time ordering henefits of electronic data interchange. EDI is the exchange of routine business documents, such as orders and involces, between trading partners' computers with little or no human

invoivement In most European countries there are at least two organisations offering EDI network services: typically, the national telecoms monopoly and a couple of US international services. In the UK, the most open telecoms market, there are half-a-dozen, plus others selling services based on them.

Network services receive transactions from customers and direct them to the right. destinations. EDI users thus avoid the oeed for separate links to every electronic trading partner: they have just a cial service.

Network companies initially kept their services separate. This meant a company trading electronically with customers which used different octworks had to have a connection to each one. Then, in the early 1990s, after much public acrimony the main services in the UK agreed to provide links

A study by the UK Network Liaison Group, made np of network companies and user bodies, shows that the links are free of charge, have technical support 24 hours a day and that business transactions are delivered from one network to another immediately in almost all cases and always within 15 minutes

Even so, there are mixed views on the efficacy of the links - and on whether they are being actively promoted by either the services companies or hig users. The Network Liaison Group

says the links between the net-

work services bave a hig role to play in expanding electronic trading, to the benefit of husiness in general - but describes the current link facilities as "technically fairly basic". The problem is that several different linking methods are used, so message formats can

change in small but significant

ways as they pass between networks. The Network Liaison Group points for example to the fact that although audit trails are provided from end to end the audit information is not always presented in a service supplier's usual format. This can

more serious concern is A that of differences in address formats hetween that of differences in petworks. In addition, some iata fields can be used for dif networks or have different formats. For example, the data field which identifies the message type can be slightly different, so a receiving network might not recognise an incom-

When this happens, messages cannot be sorted into the different types but are just passed as a mixed dump to the user." says David Kalu, EDI body, the Articla Number

ing message as an order.

Tetwork services and Association. "Big users, in particular, find it useful to get their mail sorted."

John Pennell, founder of EDL specialist Meadowhouse Bar-Laser, says users can get round some of these issues by special programming of their EDI software packages - hut he adds that this can be "a massive problem" for hig mainframe computer users with many electronic trading partners scattered across several net-

David Kalu at the Article Number Association agrees. This is one reason why some hig companies say their suppliera must connect via a specific network," he says, adding, half-jokingly, "I wouldn't be surprised if network companies introduced services such

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Services: 'Our emphasis is on

as message sorting to discour age users from linking to rival networks and using the inter-

The European Electronic Messaging Association is scornful about the service suppliers' whole approach.

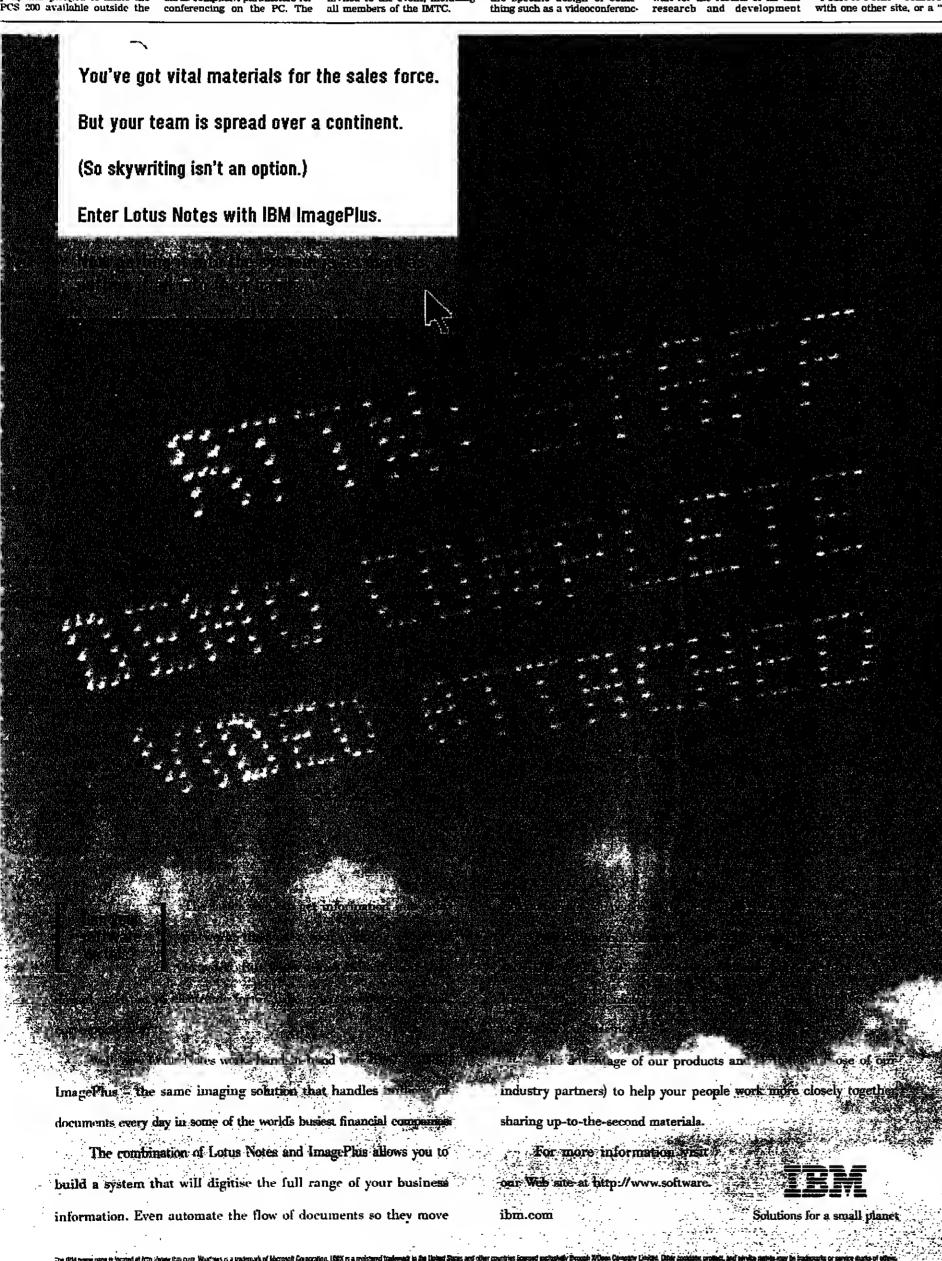
"We've surveyed network services across Europe and found little or no interconnec tion," says executive director. Roger Dean. "The UK is slightly better hut the links here are still mainly proprietary. In Europe, services link using the X.400 messaging standard but they don't offer tha X.435 EDI extension. This is all because suppliers want to hold their market share."

John Thorpe, managing director of network company GE Information Services, agrees that interconnection in Europe ls patchy: indeed. where links between international services exist they are made in the UK or the US, so traffic between users in France or Germany might first travel across the Channel or even the

Mr Thorpe also sees a need to sort out the issues of inconsistent address formats and end-to-end auditing. But he says the days when the main suppliers in the UK jealously prevented their customers from communicating between networks are over.

The market has come to realise that interconnection is good not only for users but also for suppliers, because it enlarges the whole market," he

"Transmission has become a commodity service: our empha sis now is on delivering business productivity. The real obstacle to electronic commerce is the difficulty of changing husiness processes both inside a company and



Keeping the network running - By Nuala Moran

# A range of strategies and options

ather than dreading out-sourcing as the loss of empire and status, IT managers are now assessing the contribution it can make to their operations in the same way as they might judge a new piece of hardware or an improved networking technol-OBY.

Octsonrcing is no longer something that is done to the IT manager by the finance director," says Dr Ian Dewis, principal of CSC Index, who has just concluded a study of attitudes to; and axperiences of, outsourcing among the IT directors and managers of 600 companies worldwide, including 200 leading US corpora-

"Outsourcing has gained respectability. There is a growing awareness that you can not do everything in-house, and that outsourcing must be considered as part of the IT strategy," says Dr Dewis.

In fact, ontsourcing has become a misnomer, he says. It is now as much to do with bringing in activities and assets as outsourcing them."

Kodak outsourced important components of its computer systems in 1989 and this was a watershed event in the development of a robust and thriving outsourcing services industry. Six years later, the US

Once people have

joined, motivation

rather than pay is

the main factor

stay, employers

agencies say

that makes them

and recruitment

approaches to recruiting,

training and motivating com-

jects are re-started after the

IT staffing is a special case,

because IT people have always tended to see their

careers being in IT rather

than with a particular

employer. The latest annual

IT Skills Trends Report, pub-

lished by the Institute of Data

Processing Management, shows that 53 per cent of

computer staff expect their

next job move to be to a new

employer - and 44 per cent empect to move within 12

Philip Virgo, the report's

researcher, suggests focusing recruitment effort on people whose personal circum-

stances are likely to make

"Those whose health or dis-

them stay.

esperate shortages of

skills are forcing com-

panies into new



An option allowing user-companies to focus on core

competences while improving their IT operations.

market exceeds \$10bn and is growing at 16 per ceot a year, while the European market is growing by 20 per cent a year. Dr Dewis said South Africa and Australasia were poised to join the outsourcing rush, taking advantage of the experiences of US and European com-

In New Perspectives in IT

Fresh approaches

Recruitment - By John Kavanagh

Outsourcing of services should be an explicit part of the IT strategy, not a substitute for it, says new research based on the experience of 600 user companies worldwide

Outsourcing, Dr Dewis draws on interviews with 600 IT executives to demonstrate how to structure and implement successful outsourcing relationships. Among the deals he has studied are Kodak's with IBM. Digital and Businessland; Brit-isb Petroleum's with Sema, Science Applications International Corporation, and Syn-cordia; Pacific Bell Telephone's with Arthur Andersen; and Delta Airlines' with AT&T GIS (which has oow reverted to its former name, NCR).

The research was carried out at the request of the 600 companies, which are all members of the CSC Index Foundation, the independent research arm of Computer Sciences Corporation, one of the leading outsourcing companies. According to Dr Dewis there

are four categories of outsourcing. The first two-total outsourcing and selective outsourcing - are well established. while transitional outsourcing - where ageing systems are outsourced to focus attention on the creation of a new sys tem - and transformational outsourcing - where the outsourcing company builds and

just emerging. All four types are growing steadily in Europe and North America, and are showing signs of developing in the rest of the world.

The motivation for outsourcing is changing from an initial focus on reducing costs and improving service levels. Now companies cite a variety of reasons: a desire to conceotrate on core competences; as a means of achieving change; to fix information systems or processes that are perceived as "broken" (a surprisingly high number of organisations are opting for outsourcing for this reason); to provide an infusion of financial resources.

"Several companies have recently outsourced IT to cash in on the value of their older assets in order to secure funding for new ones," said Dr

As experience of outsourcing accumulates, and the market matures, perceptions of it are changing, too. Until recently, most IT staff thought of out-

> rigin, the oew designatioo for outsourcing

operations by Philips,

the Dutch electronics giant,

has celehrated its formal

arrival in this fiercely competi-

tive marketplace by announc-

ing a £75m deal with Imperial

Chemical Industries. This five-

year contract will see Origin

and services group.

into rigorous bidding.

of impressive rivals.

While the scale of the ICI

deal and the endorsement of an

international blue chip client

are important to Origin, Its

executives cannot conceal their

delight at beating off a string

EDS and CSC, the two lead-

ing US outsourcing companies

in-house IT department.

players, bid for the ICI deal. So did French Sema and ICI's own

Peter Overakker, a senior

manager at Origin, describes

the selection process as "an

open discussion". Since Mr

Overakker's three years at

decade working for EDS, it is

fair to assume he knows the

bidding tactics of large IT com-

He says that "honesty

proved the best policy" with

ICI - "we told them the things

we didn't like. You have to be

very careful when you take

over mainframe computers, the

ontsourcing contractor must

Large mainframe computers

are expensive to maintain, and

their significance in a world of

powerful desktop PCs remains controversial. Origin will keep

one IBM mainframe running at

an ICI aite in northern

England, but a Rotterdam site

will migrate towards smaller

systems. Overakker's insis-

tence on flexibility seems to

have struck a chord with ICI

"Philips and ICI have similar-

ities in that they're both re-

the attractions of ICI as a cli-

ent. The 399 staff it has inher-

ited include a strong core of

competence in a German man-

ufacturing software suite that is currently in vogue across

the IT sector. SAP has an immensely successful series of

programs that have also found

favour in the chemicals indus-

try - "since so many projects

use SAP, we are always glad to

acquire more people who know

BSO, a Dutch software

house, 41 per cent owned hy

Philips, is one of the compo-

nents of Origin and another

home to SAP expertise. So both

parties stand to gain by a pool-

ing of specialist knowledge

that is in demand across

A recent flurry of aggressive

bidding has seen large outsour-

cing contracts changing hands.

This, in turn, has provoked

suggestions that some large

companies are prepared to

enter extremely low bids in

order to win pivotal deals that

Mr Overakker rejects any

suggestion that Origin will

enter into this game: "Forget it," he saya, and points out

that Origin has come into existence with a formidable cli-

ent list, and does not need to

engage in loss-leading deals in

A clear note of pride is evi-

dent as the former EDS execu-

tive lists his new company's

achievements: "We've even

will raise their profile.

order to impress".

it," says Overakker.

Ешторе.

Mr Overakker is frank about

organising their operations".

be free to change things".

panies inside out.

Philips was preceded by a

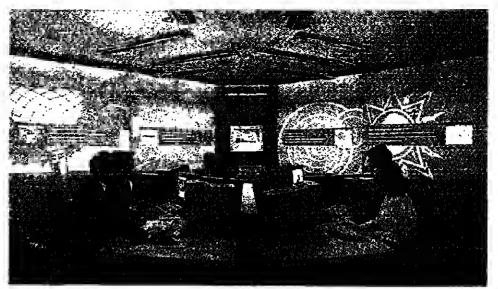
runs the new applications - are sourcing primarily as the kiss of death," said Dr Dewis. "Now the tables are turning and staff welcome being part of an outsourcing deal.'

In the past, many IT managers believed that outsourcing amounted to giving away the strategic assets of the company. Today it is seen as an effective option for dealing with many of the pressing problems facing the IT department, such as breaking free of the shackles of legacy systems and people.

However, warns Dr Dewis. outsourcing must not he viewed as the panacea for all inadequacies.

As the market matures, the nature of the outsourcing cootract is changing from a simple agreement to buy certain services. For example, British Gas and Amdahl receotly set up a joint vecture to develop and run the utility's hilling system, and sell the service to other companies: Delta Airlines hived off its IT operations into TransQuest Information Solu-

■ £75m outsourcing deal - report by Michael Dempsey



ment centre at Siemens Nixdorf, Bracknell: providing pro-active support for all ments of companies' network information systems – see also report on helpdesks, pages 18-21

tions, a 50-50 joint venture with AT&T GIS (now NCR), which will provide services to Delta and sell the same services to other airlines; and Swiss Bank acquired a stake in Perot Systems as part of an outsourcing deal, with the objective of selling outsourcing services to other financial services companies. "The range of potential motives for IT outsourcing makes it ever more critical for a company to identify why it is outsourcing. The factors that

determioe success will he

vastly different depending on the strategic inteot," said Dr Dewis. His research has identified three kinds of strategic inteot for IT: improving the operation of the IT department: exteoding the impact of IT on the husiness; and the desire for commercial exploitation of IT resources and industry know. ledge. "Failure in outsourcing can ofteo be attributed to a mismatch between the strategic inteot of the client and the corresponding motivation of the vendor," said Dr Dewis,

ships he studied, the motive was increased impact or commercial exploitation but the customer structured the cootract around improving IT operations.

"Our research shows how the purpose and nature of IT outsourcing are changing, and illustrates just how varied the strategies and options have become," Dr Dewis concludes, "There is no looger a 'one-sizefits-all' approach to IT outsour-

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ability problems of their own or in members of their family are taken into consideration can display well above average loyalty," he says. Local people with mortgages and children at school, especially mothers returning to work, are worth targeting, Mr Virgo says. Local graduates who have lived at home and gone to the nearest university might also prefer a local company. His point here is that it is not necessarily best to focus simply on people with the skills immediately in demand - or on young whizz-kids.

## Problem of age discrimination

Age discrimination is an issue in an industry in which many IT teams regard people over 35 as "past it". Yet the Institute of Employment Consultants says that more than 25 per cent of companies would fill vacancies twice as quickly if they did not specify age limits, and a further 57 per cent would fill jobs 50 per cent earlier.

Gary Ashworth, the institute's president who is also managing director of Abacus Recruitment, says age discrimination just keeps the problem going, because teams get younger and employers then say that an older person will not fit in.

"People complain about skills shortages but they create the shortages statistics themselves if they specify an Hoper age limit, hecause they're aiming at a much smaller pool of people," Mr

Ashworth says. Once people have joined, motivation rather than pay is the main factor that makes them stay, employers and

are emerging recruitment agencies say. Contractor rates might he growing at between seven and 11 per cent a year hut employers are holding down pay rises for permanent staff.

"In the more inflationary 1980s it was felt that you had to pay certain rates to get IT staff, but employers now regard IT as no different to other activities and are looking at all costs very hard," says Coin Osborn, associate director for person-

nel at IT services group CMG. Tony Reeves, chief executive of IT recruitment group Delphi, agrees and says motivation is now the hig issue - especially for companies which still insist on going for

younger staff. "Younger people, in particular, want to keep pece with technology - and if necessary they'll do it by moving on," he says. Mr Reeves points to training as all-important bere, a view supported by a survey of 1,100 members of white-collar union MSF: Almost 90 per cent said training increased their motivation, including 52 per cent who said it had a great effect. More than 95 per cent said it improved their job satisfac-

IT managers have hear all this before and point to the risk of losing young people in particular once they have invested in giving them/train-

ing and experience. But a complete rettink is needed here, according to some in the industry.

"Companies have traditionally been unwilling to train because of fears that their staff will then go to another employer," says Dave Bevan, a manager at IT retruitment company, Hunterstil. "However, these days many people are leaving to become contractors instead. The biggest



David France of Hunterskil Howard: 'Many remail people are leaving complete to become contractors'

so of new skills is now contractors. towards flexible workin fixed-term permanent tracts, contracting work of and so oo. So, if IT partments are looking at exibility, they must expect he same from staff and see pat it is in their own intersts to give training. The taff might still leave hut the

employers are developing a pool of people for the whole market - people who will very likely end op bringing their training and knowledge of a company's systems back to that company as contrac-

Philip Virgo, author of the IT Skills Trends Report, has an equally radical proposal employers in an area could get together to develop or commission IT training which is relevant to all of

## FT-IT Recruitment

Senior positions in the converging worlds of information technology and finance appear in the FT's weekly IT Recruitment section, published in UK editions each Wednesday and international editions each Friday. Also available on the World Wide Web at www.FT.com

them. This would ensure that training closely matched local needs and costs would he shared while a pool would be created of trained people who might at least stay in the area and move between the sponsoring companies.

Trends among staff to become contractors and among employers to contract work out leads Mr Virgo to highlight a oeed for skills audits to identify skills which are needed among permanent staff and tasks that can be farmed out. Training, motivation and career development can then be directed accurately et the key staff who must be retained.

Leeds Permanent Building Society developed skills audits down to a fine art and won a British Computer Society award in 1994. It introduced the society's Professional Development Scheme, which plans and monitors individuals' training and experience, and linked it to the personnel system. The results included better planning of training and recruitment to meet needs, a £100,000 saving from better organisation of training to take advantage of block bookings, and higher staff morale - even though career movement was static.

The staff were motivated by the fact that the organisation was clearly committed to

These and other proposals are still generally in their infancy, but there is a need for argency. "Employers adopting new approaches are stili in a minority." says Dava Bevan at Hunterskil. "But these attitudes must become prevalent or the jobs market will die."

## Origin enters premier league

A \$1.2bn company employing 10,000 people in 27 countries has joined the top league of outsourcing contractors

taken a contract from right claims Origin will steer well under the nose of EDS in Dal-

running computer systems Origin runs a data centre on that formerly came under the behalf of McDermott, the international chemicals group's telecommunications energy company, under a \$20m-a-year contract. The cen-The principle of hiving-off IT tre is located in EDS' bome operations on fixed-price contown of Dallas. From his Eindtracts is now established pracboven office, Mr Overakker is emphatic that Origin "bas tice among corporates. And the scale of these contracts has something new to offer as a drawn the biggest IT players truly European player. I think we are a good European alter-

nativa to other contractors". Outsourcing is often feared by incumbent IT staff, who perceiva it as a thinly-veiled exercise in cost-cutting and job clear of this kind of practice, keeping the workforce on-side in the interests of the cus-

Grundig, the German consumer electronics company, and Daf, the Dutch truckmaker, have also recruited Origin to run their IT operations this year.

1Cl is covering its bets with the move towards outsourcing. Richard Sykes, the group IT manager, reports directly to the ICI group finance director. A scientist by training, Mr Sykes describes his career with ICI as "20 years of business

that while Origin has gained cootrol of the historically important Runcorn computer centre. ICI itself retains control of future computing strategy. The £75m contract does not

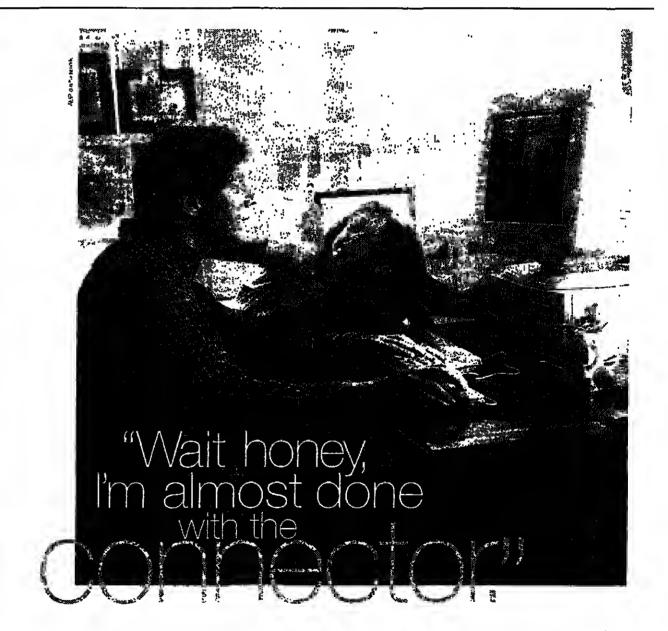
extend to ICI's actual IT budget. At ICI, we don't regard the provision of IT as a core competency - others can do that better. But the development of an IT strategy and the method of delivering that strategy is a key competency," he says.

The international corporate IT weight of ICI is spread across several outsourcing contractors. When ICI demerged its Zeneca pharmaceuticals and agrochemical unit in 1993, the company needed to split the voice and data telecoms network that serviced both operations. It would have cost reductions. Mr Overakker management". He points out £5m to do this in-house. Racal

Network Services was awarded a £15m three-year contract to handle lCl's telecoms. But Racal paid £3m for the network assets. Added to the potential spend oo dividing this up internally, ICI effectively saved £8m. Meanwhile, ICI Paints has outsourced to CSC in western Europe in a £30m deal. In North America, ICI Films employs EDS.

Half a dozen ICI personnel from the Runcorn site will remain oo the company payroll to oversee the crucial Service Level Contract: an SLC, stipulating precisely what the customer expects, is vital to any outsourcing deal - not that Mr Sykes expects problems.

Ha has fulfilled his objectives of preventing redundancies and managing change within the IT world.



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AMP

Hot spots: helpdesks and support centres

he helpdesk has sud-denly become the hot place to be. Forget the drah, untidy corner where "support" staff were once consigned to a despised lim-bo - the modern helpdesk is a lively hub, buzzing with activity, staffed by valiant heroes whose expertise helps keep the show on the road.

in some places - for example, outsourced support organisa-tions for whom the helpdesk is a "bread-and-butter" function the support centre has a fevered atmosphere similar to a telephone-sales room, with targets, queued calls and the resolution count" of solved problems on display for all to

As businesses become more reliant on PCs, the need for technical support is vital. How-ever, as machines and systems come more complex, the harder they are to use, says Duncan Brown of the market analyst company Ovum, and author of the *Ovum Evaluates* report on helpdesk tools.

The main issue is the tecbnology paradox: the fact that technology - supposed to make our lives easier - actually becomes more complex, and the users become flummoxed when they fail," says Mr Brown who is not convinced by the argument that users are becoming increasingly sophis-ticated about complex systems. We repeatedly see the results of making technology available to non-technical users, especially where IT is a part of the job - but not the core."

The customer could be internal or external. The helpdesk devised for internal users of information technology with computer problems has provided a highly adaptable model for the "customer-service

Utilities and other large companies have been quick to adapt the idea of problemtracking, using a database of solutions. There are an increasing number of helpdesk tools that deal with both IT and cus-

"We tend not to make a distinction between the applications, although some solutions on the market may address one area more than another; some, such as Vantive, sell to both,"

adds Mr Brown. His report estimates global revenues for this corner of the software industry to be about

# More help to keep the show on the road

Time spent at the helpdesk front-line is now recognised as an ideal grounding in both information technology and the core business in which it is used. The helpdesk and IT service centre is something that business managers should care about, discovers Claire Gooding



Here, and on the following two pages, FT writers examine the role of the helpdesk



As businesses become more reliant on PCs, the need for technical support is vital. Sainsbury's uses rviceCentre from Peregrine Systems to manage its helpdesk. Report, Page 20

\$280m in 1995, growing to \$813m by the year 2000: "As a good indicator of the level of growth, most of the companies we looked at were growing at 100 per cent annually in 1994

Helpdesk tools in both markets have taken advantage of IT developments such as compnter-telephony integration (CTI), open systems, clientserver, and even artificial intelligence (AI).

There are 170 different solutions sold for small and large users; some are off-the-shelf solutions, others modular and highly customisable. There is great variety, too, from calllogging and call-management tools to knowledge-based tools which use Al or neural networking.

Open systems and clientserver technology have affected both the environment in which users need help (and

more of it, in a distributed environment), and the helpdesk tools themselves. Increasingly, they use Win-

dows front-ends, and are able to operate in a mixed environ-The key is to have a single

source of contact, with all problems channelled through one point, according to Carter Lusher, a Gartner Group analyst and expert on helpdesks: That doesn't mean that there is one big call centre - lt could be multiple-tier helpdesks, but the user has only one help number to call.

"It's important to have one point of contact with distributed computing. With client-server systems, end-users might have Unix/Motif, Mac or PC, and having one point of contact puts the responsibility for determining the cause of the problem in one place, in the helpdesk, where it's their

Answering a broad range of queries puts pressure on expertise and skills. Some organisasays Mr Lusher.

tions keep a sense of excitement and urgency at the internal IT support desk by passing on specialist questions on, for example, iron mainframe computer performance - to remote experts "on The US electricity supplier.

Entergy (see report, right) demands an answer within three minutes from the frontline staff in Its "command theatre". otherwise the problem is escalated to the next level. Swift and courteous service to PC users is vital, when so many non-IT experts end up relying on their PCs for every-

"Good 'people' skills and good telephone skills come before technical skills - it's a public relations role, because

the people calling are often angry or frustrated, so troublesbooting skills are important."

Computer skills and people skills have not always gone hand-in-hand, however. Time spent at the helpdask front-line is now recognised as an ideal grounding in both IT, and the core business in which It is used: coding is no longer the only skill that matters in IT.

Training and support were sometimes considered to be jobs for second-raters, but in fact provide two-way education for IT workers. Teamwork and good communication skills count almost as much as IT skills, especially in customerservice. For people - and software suppliers - with the right skills, there are tremendous opportunities in specific market niches, including customer service, outsourcing, and training. The Helpdesk User Group

Carter Lusher: "It's important to have one point of contact with distributed computing

(HUG), a central forum for everyone in the husiness, is setting up a sister organisation specifically for insurance and healthcare helpdesks. The group has nearly 6,000 mem-ber-companies worldwide, covering 20 countries, 18 of them

in Europe. "The number of 'fix it' calls are on the decline as people get higher quality products, but there is an increase in what I call 'Just-in-time consulting'," says Malcolm Fry, an indepen-dent consultant on customerservice support, who is on the advisory board to the interna-tional Help Desk Institute, HUG's US counterpart.

"End-users now have access to end-user tools such as PowerBuilder, so now the typical enquiry is: 'I've written 15 lines of code and it's not work-

ing'.
"With Web usage spreading, there's a shift in the tools requirement: you need desktop imaging and the ability to work two machines together as one, 'walking through' the pro-

Such tools may help to bring down the total cost of IT, 80 per cent of which clocks up after installation, according to Bill Kirwin, Gartner Group's vice-president and developer of the widely-used model for the

total cost of IT ownership. "Every dollar a company saves on formal support costs around \$1.50 in hidden costs, because the support effort just gets pushed down the line to people who are paid to do something else," he says. "We call that underground snpE Electricity industry application

# Service with a smile

The helpdesk can be a good place to get to grips with the way a company operates, writes Claire Gooding

t Entergy, IT support is A far from being a dead-end job. Philip Orton is back at his desk at 7pm, while everybody else is celebrating with a fellow member of staff who is retiring after 44 years in the company. Mr Orton is director of computer operations at New Orleans-based electricity supplier Entergy.

"If you object to being on call, you don't belong in a joh like this," he says. Charming on the telephone, relaxed, and remarkably tolerant of being bombarded with questions, it becomes obvious why he in in charge of a "command theatre" (no humble "helpdeak" here) which has become a sought-after career step for IT, staff in

"If you go back three years, you begin to see dramatic shifts in the way helpdesks were deployed," he explains.
"Services radiated out from a
central mainframe, and that began to change, because of the huge nptake of personal computing and the PC, the change in the telecoms network architecture, the different communications protocols. configuration, management and the piecing together of systems supporting different

devices. "The way the applications were being built also started to change along with distribution throughout company. The groups then became inter-de-pendent as well, because the environment couldn't stand on its own - the help had to be integrated in the same way that the services had become

Entergy looked at varying levels of consolidation and discovered that the number of disciplines and functional groups were growing to support the way applications were delivered. "The functions were growing and changing, in the way that a helpdesk activity got involved: it was a matter of what you need when you need it - check and adjust all the tima - people technology, staff levels, whatever needed adjust-

The company looked at the consolidation of 15 helpdesks, with the help of the "Ultimate Helpdesk", a committee of 12 people who represented all the different business units and helpdesks. They did a requirements specification, scanned the industry and examined several solutions including Infoman and KBMS.



sought-after career step for the company's IT staff



IN THE TRADITION-BICH neighbourhoods of New Orleans, a global network china with the centuries-old home of Wedgicood. The IBM Global

Network lets Wedgit and keep its master craftspeople working together in Britain. ichile sull servicing customers in cities and towns in ser only countries.

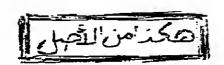
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■ Bureau service - By Claire Gooding

## Customer services shake-up sparked electricity sideline vice - it depended on which the most impressive and them on to someone else."

Helpdesks need not stick to just one area of expertise: London Electricity is helping to sell gas

s a sideline to electricity, London Electricity now sells helpdesk services. Its centralised customerservice centre proved such a success that It set up a hureau service, and now its first client, Total Gas Marketing, is using. LE to service the response to

an advertising campaign.

Jon Gritten, business development manager at London Electricity, plans to sell expertise and customer services, such as call centre services. from the regional electricity company's customer operations centre, set up In Bexley Heath early in 1995.

Previously. LE's own customers had experienced problems: "We weren't giving a consistent quality of ser-

A freephone

customers to

ActionTrac's

number connects

experts in the US

icture this scenario. .

report is nearly finished. You

just have to transfer some fig-

ures from the spreadsheet, do

a speil-check, print it out,

and... the computer goes

down at the 11th hour. You

call the IT department, but no-

one is available. The frustra-

But now there is a PC

Superman to help: ActionCall.

US company ActionTrac, pro-

vides 24-hour, 365-days-a-year

support for all PCs and their software systems.

The service aims to solve

problems with a wide range of

hardware: all the main operat-

ing systems, including Win-

dows NT and Windows 95.

Novell, DOS, OS:2 and Macin-

tosb System 7.x; leading appli-

cations packages, including

desktop publishing, graphics.

project-scheduling and inte-

grated software suites; utili-ties, such as Anti-Virus,

Backup and Scan: add-ons.

such as godems, CD-Rom and

Continued from facing page:

There were only two possible

choices that used Entergy's

cheseo environment of a cus-

tomisable Unix-based database

such as Sybase or Oracle.

the helpdesk. It chose Vantive.

a tool from Santa Clara-based

Vantive Corporation, huit spe-

cifically to integrate with other

The hardware supported at

Entergy ranges from PCs, rout-

ers, customer applications,

nempherals, including support

for TSO and other mainframe

"Our helpdesk people do

more at the first-point resolu-

tion point than most: they han-

dle a wider variety of things. If

your database of resolutions

matches your problems well

enough, agents can find resolu-

tions done by other agents

third party software.

tools.

using Pentium workstations on

fax links: plus multimedia problem with word processor,

come in.

tant.

that causes.

This service, offered by the

tioo is indescribable.

Racing to beat the

clock, your 20-page

one of our five different call centres the customer rang, and who they got oo the phone. So we amalgamated the five centres," explains Mr Gritten. This meant there was a clear

brief when LE started looking for helpdesk software, "Whatever the electricity issue was, they could ring one number and the person would respond quickly, and secondly would be able to resolve the difficulty. Whatever the issue was, the aim was to reply in one call." The speed of amalgamation.

over a six-week period, cut down the number of potential suppliers. LE looked at five vendors supplying packages that dealt mostly with internal customers, and chose US company Inference, from Novato Ca, whose CBR2 product uses "case-based reasoning" to store and retrieve information for IT helpdesks and customer-care call centres,

It is expanding rapidly worldwide, and bas a UK operation based in Slough. "Inference's response was

systems and the internet.

Customers of ActionCall.

which was introduced in the

UK a year ago, call a free-phone number which connects

them to ActionTrac's experts

So far, the company claims a 100 per cent "soive" rate for

callers' problems - most are

ActionTrac has seen its cus-tomer-profile change, too, ini-

tially the customer list was

comprised of mostly non-tech-

nical mainly financial man-

agement: now 20 to 30 per cent

Third party desktop sup-

IT departments, admits Simon

of ActionTrac (UK). "Now IT

departments are more focused

on areas which are busines

critical', such as internal net-

working or replacing outdated

kit. In-house It departments

are coming and saying 'take away the desktop application

and let us work on our core

large project or major IT fail-

are within the organisation,

often don't have time - or

don't want to take the time

- to sort out an individual's

when the repeat problems

Mr Orton analyses the num-

ber of calls coming in, and the

number of problems electrooi-

cally passed down to the sec-

ond level. "We also analyse the

individual calls of agents. After

the fact, analysis reveals how

difficult or esoteric the call

might be. If they can't handle

it in three minutes they have

to pass it on. To keep your

service levels consistent they

must not jam up the first level:

high resolution rate is impor-

A morning management meeting looks at flagged prob-

lems. Anything that is not rou-

tine gets filtered through and

the management team does an

Entergy's management

approach is unusual: ar "offi-

cer of the day" is in charge of

analysis of problem types and

Command Theatre's rapid service

"Technical staff, busy oo a

port was previously

seen as the "enemy" hy

with IT departments.,

sorted within eight minutes.

Experts only a phone call away

■ Rapid help for PC users - report by Marcia MacLeod

responsive, and they offered us precisely what we wanted at the right price, within the sixweek deadline," recalls Mr Gritten. "The account manager gave us excellent support, giving us all sorts of support in the early days."

London Electricity uses a mix of PCs, with the customer information held on an Amdahl mainframe, The purpose-built centre with its new technology required an exactlng training pro-gramme - which last year won an award for excellence in

"It is very comprehensive - every operator receives five weeks' training before starting, with an update and ent every eight weeks using video and other techniques," says Mr Gritten, "The objective is to make sure that every single operator gives a constantly high level of service. It is all centred to giving the customers the correct answer rather than keeping them hanging on, or passing

database or spreadsheet," says

Coulter Electronics. a

Lutombased manufacturer of

particle counting instruments,

uses ActionCall to back up its

internal support. "We have

one person supporting upwards of 200 users in the

UK," explains Poter Arnold.

management information ser-

vices operations manager.

We turned to ActionCall last

of the peaks and troughs of

Flexibility in

is another

benefit of

ActionCall

expertise, we do have prob-lems which even they cannot

cope with. So if there is a

problem our in house staff

cannot deal with, they call

ActionCall, which in turn

talks directly to the person having the problem. Pirelli Cables, which makes

fibre optic and other cables at

six sites in the UK, signed up

with ActionCall in April 1995

to help the IT department to

ated when we tried to figure

out how to manage all the

crazy things happening in the

environment. We couldn't find

e single structure that would

fit permanently the way the

organisation was changing. We

nad to find a dynamic organi-

sation, a structure that would

move with the environment.

Focus on support

"We didn't want to duplicate

responsibility, so the officer of

the day took charge: he or she

would respond and plug in the

required skill and then move it

out. There's always someone

in-house who has a responsibil-

ity to get it solved, though they

might have to go back eise-

The red neon announcemen:

above the support centre

announces the "Entergy Com-

where.

cope with an unusually test-

vember to smooth out some

Although we have in-bouse

payment terms

LE now receives 37,000 calls weekly, whereas the five call centres used to receive 50,000 calls weekly. "We deduced we were giving

a much better level of service in answering the query first time around," says Mr Gritten. "From one centre, we are able to answer the query and give them the correct information. We do independent customer satisfaction surveys, and the most recent one six months ago - by NOP - gave us a 91 per cent level of satisfaction with the call-centre centre. We're striving to increase that still further."

Graeme Boyd, Total Gas Marketing's sales and marketing manager, willingly recommends the service. "We understand that this was the first time that London Electricity bas used the Customer Inquiry Centre for an external organisation. We were pleased with the speed of response and the comprehensive IT and telecoms approach LE was able to

We were introducing a new

network, switching from

stand-alone PCs with a num-

ber of different software pack-

ages to a standard configura-

tion hased on Microsoft," explains Paul Freemantle, IT

manager. "While our IT staff

was working on the transfer, I

didn't want them to be

diverted from their main task

- but we still had to support

desktop users, particularly

those being given Microsoft software for the first time."

users throughout its six facto

ries, but because Freemantle

did not know box much help.

employees would need, he

signed on for 50 calls a month.

rather than on a per-user

basis. Some leeway was built

into the contract so that if Pirelli Cables used less than

50 calls it could get some free

service later, and if it called

more than 50 times a mooth.

if would pay Attroa Trac extra.

terms is another benefit of

ActionCall. The published tar-

iff is £149 a year for a single

user, or about \$14 \$15 a call.

However substantial volume

discounts bring the annual

user call down to about \$110.

or customers may pay for a

pre-determized number of

Action Trac is on 9500 354000.

include large-screen custom-de-

sizzed monitors, and a confer-

The emphasis on good sup-

port has made this a sought-of-

ter place to be: support staff

get an inside edge on the way

the company operates. The

very people who were the most

rejuctant to take part - the

business representatives - now

emjoy their three-month stints.

Their tasks include follow-up

"care calls" to see if internal

customers are satisfied with

ter if there are good relation-

to changes in the organisation

- it just flows right with it."

concludes Mr Orton "It's defi-

nately improved the attitude to

the people who work in that

environment - their sense of

pride has improved.

ships It's absolutely immune

"Problems are resolved but-

ence room.

ice service.

calls, as Pereili Cables did.

This Sexibility in payment

Purelli Cables signed up 500

ing period.

■ Retail automation: application report - By George Black

# A helpdesk for Europe

New software will enable problems to 'follow the sun' from one region to another so they can be worked on around the clock

P Oil, part of the UK's largest company British Petroleum, is introducing a helpdesk across Europe, hased on software from Intercom Data Systems

The scheme has started in Germany, where it will support point-of-sale and hack office systems being installed at 1,300 petrol stations. It is in Germany that BP's long-running Europe-wide Retail Automa-tion Project (RAP) is furthest

The petrol station systems and the helpdesk are also now being adopted in the UK, with France, the Netherlands and other European countries likely to do the same sooo. Wherever the RAP is rolled out, it is intended that the IDS helpdesk will follow. Until three years ago, many

of BP's retail systems problems were tackled with fairly cumbersome paper procedures. To alleviate this, the company considered developing its own helpdesk system, hnt decided against It hecause it would have been too expensive.

The IDS product was chosen mainly because it was rated as more flexible than the alternatives. Mark Waile, a technical manager with the consultancy Warwick and Sons who has been working with BP on

Until three years ago, many of BP's retail systems pro

implementing the helpdesk. says the IDS software can be eastly tailored

You can modify it to suit your own business procedures. rather than having to change those procedures to suit the

software." he says. The software was installed on personal computers, first on the Unix operating system and later on Microsoft Windows, at BP's helpdesk in Hamburg, staffed by 12 operators. This function was outsourced two years ago by BP to a local consultancy called Anthros.

The helpdesk keeps an inventory of all the hardware and software in use by its customers. Helpdesk operators can log on remotely to PCs et the petrol stations to try to find

out what is the trouble. They have access to data on all earlier calls which may throw

light on the problem. If they cannot resolve the matter on the spot, they can send a fax from their PC to call

in expert support. The system is linked to Microsoft Mail, so that if there is any serious delay there can be an "escalation" of the problem, by alerting management

through an e-mail message, BP's helpdesk in Germany has already taken 40,000 calls and is now logging them et 1,800 a month. On average, a query takes two days to-

In the next one or two years, BP hopes to be able to integrate its helpdesk systems between countries, so that experience of handling calls can be aggregated in an inter-national database and solu-

tions shared. New software from IOS will enable problems to "follow the sun" from one geographical region to another so that they can be worked on around the clock, according to Alan Neil-

son, IDS group director. Last year, BP began using IDS's new data mining product called Infomine, incorporating the Verity search engine, which allows helpdesk operators to input general questions in natural language and get quick responses from the sys-tem. Mr Waite says this has been extremely useful, particularly for new operators who may know little of previous dealings on the helpd

The IDS system has proved its worth in spotting trends, says Mr Waite. "Before, it was very hard or impossible to identify these trends. For example, there was a printer problem in the petrol stations which was affecting customer service. When we identified this we were able to go to the suppliers with hard evidence and persuade them it was a real problem. Until then it had only been a gut feeling that there was something wrong."

The helpdesk has also helped BP to keep a tighter rein on subcontractors by detailing the work that needed to be done,

IDS is a privately-owned UK company based et Woking, with an annual turnover in 1994 of £5th. The BP contract has been worth about £120,000

and off between different

Now, client-server systems

can combine a number of dif-

ferent systems and their front

ends, all working from one

screen. For example, either

they simulate the old systems,

or support new code which per-

forms the integration at appli-

cation-level, producing all the

information they need from

multiple clients and servers

"Intelligent" tools track

problems by referring to a

database, and recognising

"clues" so that the helpdesk

staff can track down the appro-

priate solution which may

bave been reached and stored

on a previous occasion. These

products can spot problem pat-terns and "predict" answers.

Bendata, Astea, Magic Solution

Examples include Remedy.

through a single screen.

systems they are supporting.

Heip on demand

## Customers count the cost

The helpdesk market has mushroomed rapidly, bringing together so many different strands of technology that every supplier seems to be setting out a slightly different stall. Claire Gooding goes window-shopping

I ighty per cent of the cost of owning e system comes after installation. according to research hy the Gartner Group.

Client-server installations may distribute power, but they also distribute the support function, which may exist on an informal hasis. Findings suggest that support and administration accounts for as much as 14 per cent of the total cost of PCs. Helpdesk tools offer a way of keeping costs

under control. All the above factors have fuelled a market which Gartner estimates is worth \$245m in 1995 (53 per cent growth over 1994) and likely to grow to \$405m hy 1997. PC suppliers such as Dell and Gateway have long known the value of good support in selling PCs. But customers are fast waking up to the fact that the purchase is the beginning, not the end of the speod, with sundry upgrades, extras, education and training, and the oeed for expert support, even if users

ouly explore a fraction of their software's functionality. It is not easy to measure the productivity which the PC is supposed to create, although one recently launched product. DeskWatch Expert, from London-based ProMetrics, attempts to do exactly that. Described as a PC management system, it is a sort of desktop tachometer, reporting back to managers on

productivity and technology issues. Tuned to each user-organisation, it can even suggest corrective action, such as an upgrade, training, or redeploy-

ment of resources. "What is missing is knowledge of how the technology, and more importantly the user are behaving and interacting at the desktop," says Bohbie Ttoulis, marketing manager at ProMetrics. "If this knowledge were evailable, the helpdesk would be able to provide proactive support to end-users. allowing them to plan resources and address issues before they impact the user."

easy-to-solve problems, while "open" multi-user systems and mainframes pose fewer hut knottier problems, often involving systems software. Before client-server systems made it easier to integrate different computers, companies

throw up a high volume of

often had dedicated support and a senarate problem-tracking application for each use system. Most organisations now choose to cut the overhead by centralising (or even outsourc-

ing) support. Multi-platform computing has brought a challenge to which most software suppliers have risen. In a field which has 170 or so competitors, there is e hig gulf hetween all-encompassing systems that can address the

protocols on every platform, and the plethora of small prod-ucts at the bottom end of the the network, while other com-

Client-server By the mid-1990s, companies By a rule of thumb, PCs

consultant at IBM, agrees that client-server technology has impacted belpdesks in a number of ways. in the past, support staff might have to log on

market. Some modular systems cost anything from £30,0000 to £100,000, depending on size of panies prefer to huy small com-partmentalised epplications and glue them together

systems and the standard solution

shopping for helpdesk software wanted adaptable solutions. They looked for software based on Oracle, Sybase, Informix, or Microsoft SQLServer, the industry standards that could cope with multiple environments, according to Carter Lusher, Gartner Group analyst and expert on helpdesk solutions. "Software suppliers provided integration as a service at first, but creation of open gateways opened up the possibility for a number of add-on products and extensions that enhanced the capabilities of the helpdesk - the typical support centre needs access to whole range of information." Gevin Roach, client-server

and Target, recently acquired by Applix . Artificial Intelligence has found e natural home in the helpdesk, and the expert shell from Slough-based Inference is the basis of several

Remedy is widely used in the UK, servicing large-scale sites such as Ghevron where two sites are served from one helpdesk, servicing e thousand users. "Inference is interesting hecause it has re-invented itself from a general purpose Αĭ

Continued on next page 

they need for contact. Everything's quicker and easier for

the customer service represen-

Stall from Assistware's Dub-lin headquarters helped with the installation and configura-

tion in October 1995, and gave

project managers a month's training. The system currently

tatives." he adds.

## ■ Electricity supplier: application report — By Claire Gooding Handling 4m calls a year

Norweb had to find a way of supporting more than 2m customers from one centre instead of six. It turned to an unusual source; information management consultants TMS

inding a call centre that could cope with im calls annually was a priority for Norweb. The UK's north west electricity supplier. recently taken over by sister utility North West Water, has a territory that extends from the mand Treame". Other facilities Scottish border to north Chesh-

Centralising customer support for its 21m customers in one centre posed specific problems, according to Ken Harrison. Norweb's domestic customer services manager who looks after the new customer centre at Boltoo.

"We had recently centralised into one customer centre in Bolton, from six centres scattered across the oorth-west, as a result of the Littlechild distribution price review. We wanted to be ready for the 1998 opening up of the market, so it was important to built a 'centre of excellence' to ensure that we delivered the right levels of customer service. We had various goals and aims, some set by the regulator, such as missing appointments (we pay \$10). but we had our own internal goal: to answer 90 per cent of



ready for the 1996 opening up of the market

our calls in an average of 20

seconds. "The existing Aspect call centre system was upgraded to the new Bolton centre, where 200 staff at any one time answer customer enquiries.

"One of the problems we found when we centralised was that instead of dealing with a familiar location, they were dealing with much larger areas. So it was important to know the appropriate contact for a query in Carlisle, and a similar one in Buxton. "Norweb needed a tool that

would provide a quick-reference procedure. The computer services development manager saw a demonstration of Assis tware, now supplied through TMS, one of the UK's leading information management consultancies, and was impressed. "We had looked at one or

two others, but this was particularly user-friendly, and was appealing because it could be supported in-house hy ourselves with the minimum of training. At around 230,000 it represented better value than some other solutions we saw."

savs Mr Harrison. One application is an internal directory, which had to be searched after receiving a call from a customer. "It's now onto Assistware so that they can quickly click on to the name, and find all the details

training. The system currently runs 10 applications, including the telephone directory, an information system to broadcast the ansates in company propedure, and a system to deal with finquiries arising from the £50 rebate for domestic customers that results from the National Grid flotation. This attempts to anticipate the most likely incoming questions and provide stock answers.

"It was easy to install and configure, and in fact the 200 or so staff who use it only took & few minutes' training, each, partly because of the familiarity of the PC and Windowsbased environment. Wa're delighted with it, and we can see from the continuous measurement we perform that it. has helped us get closer to our targets," concludes Mr Har-

43 - 1 to 1 to 1

# A service for the 'New World'

Escom's expansion is mirrored by the volume of calls which ICL fields

orbus, the wholly-owned service and support arm of tCL, the UK-based and Fujitsu-backed computer company, has discovered the New World, Mr David Hesketh, buslness manager for coosumer products at Sorbus, characterises a whole line of service work as "New World busi-

Last year. Sorbus turned over £568m in Europe, of which £318m was contributed by UK business. One growing line of revenue is the provisioo of helpdesk services to other hardware and software ven-

The term "helpdesk" is misleading. Keeping computer users happy requires much more

than a pleasant telephone manner. A user query can be astonishingly banal or borribly technical. But as the personal computer has moved firmly into the arena of consumer electronics, any support operation has to reflect customer

expectations.
To sell high technology to the general public, suppliers must be able to field a great amount of queries. Setting up an operation to deal with this does not suit many vendors, which is why the German personal computer retailer Escom uses ICL Sorbus to provide its helpdesk. Since 1987, Escom has expan-

ded to 445 stores in 10 European countries, becoming the third-largest PC supplier in Europe with a turnover of

Escom bas also expanded rapidly io the UK, moving from 27 stores at the start of

year. As it moved beyond 100 outlets, Escom had to decide how to structure a support service for sales of more than

It began discussions on bow to handle this big increase in

The contract is worth between £2m and £6m to ICL

shop oumbers with ICL in

April 1995. On May 11, ICL opened an Escom helpdesk at its centre in Footscray, Kent. The contract is worth between £2m and £6m to ICL, depending on the volume of inquiries. ICL boasts a wealth of experience providing helplines to

be disastrous to insert the model of a corporate helpdesk into the Escom contract - "the consumer business is very different. We had to set this up from scratch. The person who handles phone calls is also responsible for diagnosing whether it's a software prob-

But Mr Hesketh knew it would

If a home visit is required. the field engineer cannot rely on having someone to open the door at any time of the day. Corporate customers employ reception staff, while domestic consumers are often only available out of office hours - so scheduling a practical time for a visit is a critical part of the belpdesk's work.

lem or a hardware problem".

Escom's expansion has been mirrored hy the volume of calls ICL fields. In January, the Footscray facility handled Given the nature of the cus

prising number. Some people do need advice on how to switch on their brand-new PC. Between 85 per cent to 90 per cent of calls are dealt with over the phone.

Mr Hesketh speaks of his telephone staff with evident pride, but even the most expert technical support staff need some back-up. ICL devised a Knowledge Based Sysiem, or KBS, to keep up with Escom. The KBS is a program that contains all Escom products and allows staff in Kent to summon up the precise part of the system that concerns each There are now 150 ICL staff dedicated to the Escom

account Hesketh's Sorhus unit handles helpdesk facilities for other chents, including Micro-

ICL clearly has a future in



speaks of his belephone staff with evident pride but even the most expert technical export staff need some back-up

## ■ Help on demand Newcomers liven up the helpdesk marketplace

commercial users of IT.

Continued from previous page

company to a specificaltyaimed helpdesk provider," says Duocan Brown of Ovum. author of of the report called Ovum Evoluotes Help Desk Tools. "There are other computer-based reasoning products on the market, including a range from the Molloy Group, called Top of Mind."

Other case-based systems include HDE, now supplied, after several changes of hands, by UK-owned Strategem Group. Built specifically for IT cootres, it uses case-based reasoning designed to maximise the effectiveness of the first-

Competing with Remedy, Utopia, and Quetzal, prices start at £10,000 for a small system of five seats, and go up to 150 seats. Financial users include Lloyds. NatWest, Bradford & Bingley, II is a busy marketplace, livened-up by relatively new companies such as Answer Systems, Remedy and Software Artistry (the latter two went public in March 1995, and Platinum technology bought Answer the following month).

Established suppliers such as Bendata Management Systems. IBM and Magic Solutions rewrote their offerings in response to the challenge.

Now software developers with their roots in customer.

arena. Carter Lusher cites Prolin, Vantlve, Scopus and Quintus as Interesting companies that have put together suites of modules with a wide breadth of functionality - "customer service, logistics, service track-

ing, and other features. Others

level of service - price is no longer the main concern'

bave a good set of tools for integrating with the internal architecture, such as Remedy - they all have a slightly different story but the common

theme. Fast growth is common in the helpdesk sector: for example, since intercom Data

ish software company, launched its Hetpdesk for Windows in June 1994, It has sold 2,500 ficences and brought in

revenues of £2.6m. Alan Neilson, group director. now claims IDS as one of Britain's leading suppliers, in the top 15 per cent, with 9m income and employing over 100 people.

"We saw a niche five years ago, and after extensive research, talking to 35-40 banks and retailers, we decided to focus not just oo internal software and hardware helpdesks. but on supporting husiness procedures, with a large element of workflow and telephony," he says. Mr Neilson argues that every

organisation has woken up to the aspect of customer loyalty: Quality of response is very difficult to measure, but because customers have more choice, and it's easy to move on. People judge on the level of service - price is no longer the main concern. That means putting procedures and practices in place that resolve problems at source."

One LDS customer, the savings hank TSB, uses the system for regulated complaints and concerns management. It has been able to upbold rigorous new standards for responding to customers'

calls and controlling their pro-

cess, according to the rules of the Service Centre, retains its their regulatory body, the Per-socal Investment Authority.

"The system set up "demons" based on business rules, such as, if it is a life policy, then send out a certain set of documents. We find that forward-looking organisations - one such user is TNT - are focusing on their core business by outsourcing to third par-

ties," he says.
"They use helpdesk for Windows to monitor third-party response-levels to show how effectively they are performing against their service level agreements. That's a real money-saving that can be quantified, because of re-negotiation or penalty clauses in contracts," adds Mr Neilson.

Few helpdesk systems embrace "legacy" systems, although one that does is USowned Peregrine Systems of San Diego, which shares its roots with IBM's Infoman problem-resolution system. "Our automation links to legacy platforms such as MVS.

even when running on Unix boxes, makes it possible for us to pick up IBM inventory data, such as from IBM's NetVlew, which is something few prod-ucts are able to do," says Andrew Walley Peregrine's UK and Europe general manager. The Peregrine Network Man-

agement Systems, now sold as

ell and others. Sainsbury, the UK food retailer has integrated the Peregrine product through-

emphasis on large-scale

systems and high volume of

enquiries, although it now

runs on multiple platforms,

and supports SNA, Unix, Nov-

Malcolm Fry says fust-in-time' training is more useful than

out its stores, (see report, right). Other users include Lufthansa and ABN Amro. Good support goes hand in hand with training, a factor that has played a large part in some products. UK company Prince, based in Hammersmith, prides itself on a pro-active attitude to support.
"Because we come from a training background, our approach to support is that is should be knowledge transfer rather than crisis management," says Nigel Burnford.

operations director for Prince

technical services. "As the problems come in we do 'root-cause' analysis and try to provide long-term solutions. For example, at Glazo, a large proportion of Word enquiries came in to do with mailmerge facility: mailmerge had been excluded from the training programme hecause mailing had been handled

"Then the department bad taken mailing in-house, but without training. A one-hour training workshop fixed the

Malcolm Pry, an independent consultant on customer service support, describes "just-intime" training as taking place on-demand, fully in the context of husiness use, and therefore more useful than generalised training: This form of consultancy can be cheaper, too; one client worked out that JIT questions cost around £350,000, whereas formal training would have cost £600,000.

Ovum's Duncan Brown sees training as a separate issue, however. "I'm not convinced that just in time training really happens, it's best practice,

the helpdesk suppliers is international, 24-hour support that "follows the sun." an issue already addressed by a few outsourced help organisations. The way forward is presaged

by customer-service applications such as the international Dealer Communications system implemented by EDS for Geogral Motors, which chan nels enquiries from 14 countries in 11 languages through a centre in Antwerp. Astea's 1995 contract with

AT&T established Its Dispatch -1 systems as a worldwide standard for customer service in 108 countries.

Other IT-hased companies, such as Canadian software developer Speedware, are using the Internet for global customer support. "Internationalisation is an issue for relatively few compa-

nies, because only a few operate in a global environment helpdesks will be national, even if the applications software they are using is global," predicts Mr Brown. Next month: the main theme

of Software at Work in the next issue of FT-IT Review on Wednesday, April 4, will focus on statistical analysis and modelling packages in sectors ranging from finance to mann-

## Streamlined management system at

Sainsbury

Sainsbury, the UK food retailer with 350 branches, is one of the first retailing businesses in Enrope to move towards an enterprise-wide service management system for its complex computer net-

work, writes Michael Wiltshire. The company installed its first computer in 1961 and hy the mid-1970s had two mainframes. In the 1980s a semidistributed computing network was installed and by the early 1990s there were PCs in every branch, allowing more

advanced re-ordering syste Mr Martin Wright, technical infrastructure manager at Sainsbury, says the company recognised that a new support structure and service manage ment strategy was needed to keep track of all its PCs, figuration data from mainframes and minicomputers.

"A high level of quality IT service is the only way to ensure that the queues are short, scanner downtime is minimised and store shelves are kept well-stocked," says Mr Wright.

"At one time, in-house IT staff used to handle individual system problems, but for the new and complex environment, this control function was no longer adequate. For example, to access just one application through a PC might involve going through eight different layers of soft-

### Better control

The solution was found in a Peregrine Systems' Service Centre which could recognise all the company's desktop PCs checkout scanners, and open system computer platforms. In particular, the new sys-

THE PARTY OF THE P

tem has the facility of "consolability" - or the ability to view everything from one console, while allowing the system to expand to meet future The new Service Centre

streamlines the helpdesk and problem management process giving greater control over the IT system, says Mr Wright. "There is probably no other

industry where data processing is more critical to the business than in the retail sector. The Peregrine system was developed in San Diego, Calif-

ornia. The company's Euro-

pean offices are based in the UK at Richmond, Surrey.

## SERVICES MARKET

- 1-2 Accounling Software
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Conditioning

14 CASE Tool (Computer Arced Software Engineering

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Cost

## Getting fresh air indoors.... ....is a breeze

If you think air-conditioning is an expensive luxury or a long and complicated process to install, then you obviously haven't been introduced to Fujitsu's new 45,000 BTU/h cassette unit.

The 45,000 BTU/h fits unobtrusively into any false ceiling and features knock out panels that can provide fresh or recycled air to even the furthest corners of a building. This means that additional rooms may be linked to the system. It also features a 3 phase operation with reverse cycle heating options.

But the 45,000 BTU/h is just one of a wide range of air conditioners from Fujitsu. As well as cassette units they include floor standing and wall, window or ceiling mounted models, all of them neat, unobtrusive and stylish. They feature a whole host of technological innovations such as infra-red remote controls, a super quiet action and a unique multi-directional air flow adjustment system which ensures an even distribution of air in every direction. There is also a choice between units which supply cool air and those which offer both cooling and heating options.

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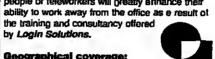
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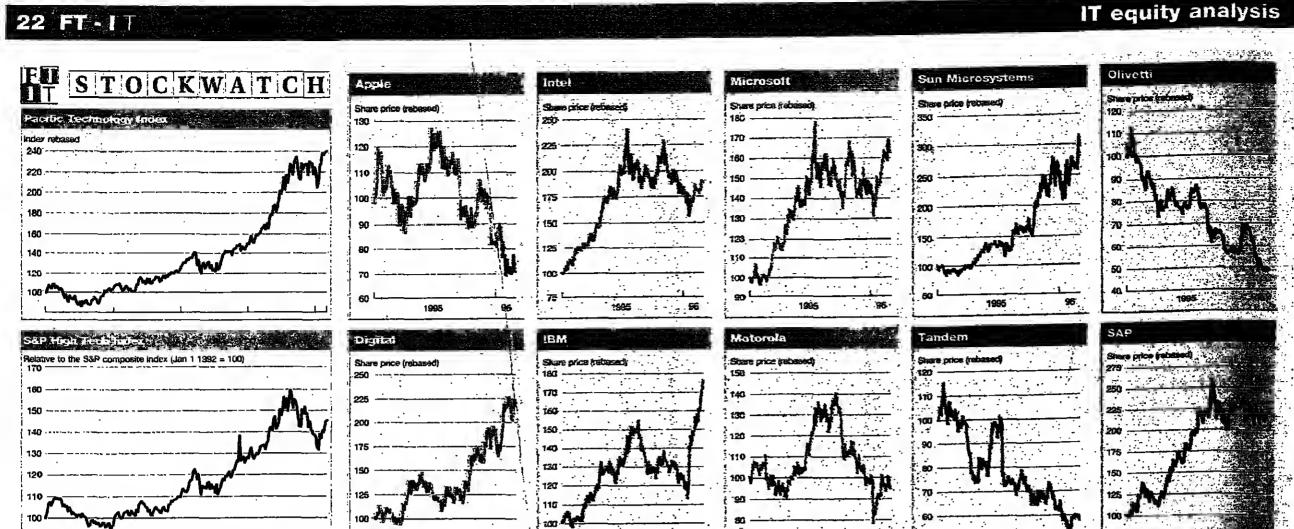
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## M Stockwatch comment

## IT investors are becoming more choosy

Technology shares have generally improved, writes Paul Taylor

arly 1996 has seen con-tinuing volatility in technology shares oo Wall Street although, bnoyed by generally healthy full-year stocks have bounced back

from their early January lows. There is also some evidence that investors are becoming more choosy. Overall technology shares, as measured by the S&P Technology Index, have comfortably ont-performed the Composite since

Among those shares rehounding. International Business Machines' shares have risen sharply since mid-January when the computer company reported stronger than expected full-year earnings. IBM shares closed Febraary at \$128%.

Other strongly perform technology shares include Cisco Systems, the networking specialist whose stock has been one of the best performing over the past year, Digital Equipment which has staged a remarkable turnaround and Hewlett-Packard which is continuing to gain share in the personal computer market on both sides of the Atlantic.

Similarly, shares in beleaguered Apple Computer have risen in recent weeks following positive statements from Mr Gil Amelio, the company's new chief executive, who has said Apple's problems could be righted and that it would return to profitability in the oext year. The shares ended

February at \$28%. The rebound in Apple's share price has also helped boost the Nasdaq, which has o high proportion of well-known technology companies on its lists, including Apple, Micro-

soft and Intel, the US chip maker. Intel's shares, like for dynamic random access ended Peternary \$51 1/10.

Compoters has recovered reported a 49 per cent increase: in fourth quarter sales, but acknowledged that this was a disappointment.

Meanwhile, Sun Microsy tems cootinues to be one of the arriver and best performing stocks on Wall Street - its shares have more than tripled in value \$54% at the end of February. One of the factors benefiting

Sun has been the growth of the Internet. However, most Internet service stocks took a hit last week after AT&T announced it was entering the consumer Internet access market with Netscape Communications and Spygiass, two luternet software makers, both slipping. UUNet Technologies, which provides Internet ser which provides Internet ser which provides Internet ser which the services also fell sharply following an Bear Stearns analyst's

In Europe, Germany's SAP software group continues to power shead. SAP's shares, tong history and shead at the end of Fehruary, have risen by over 70 per cent in the last year. In contrast Italy's Olivetti group, still aner sowe; PC business, has seen shares lose almost 45 per cent of their value in the past year

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